JUNIATA COLLEGE

JUNIATA COLLEGE BULLETIN □ 1976 / 1977 CATALOG ISSUE

JUNIATA COLLEGE CALENDAR 1976-1977

FALL TERM (49 class days)

Sept.	6	Residence halls open—1 p.m. Dining hall opens—5 p.m.
	7	Registration—1-5 p.m.
	8	Classes begin—8 a.m.
Oct.	6	Mountain Day (rain date Oct. 13)
	16	Homecoming
	30	Parents Day
Nov.	16	Fall term classes end—5:30 p.m.
	17-20	Final examinations
	20	Thanksgiving recess begins—4:30 p.m.
	21	Dining hall closes—9:30 a.m. Residence halls close—12 noon

WINTER TERM (50 class days)

Nov.	28	Residence halls open—1 p.m. Dining hall opens—5 p.m.
	29	Registration—8:30 a.m.-5 p.m. Classes begin—8 a.m.
Dec.	22	Christmas recess begins—5:30 p.m.
	23	Dining hall closes—9:30 a.m. Residence halls close—12 noon
Jan.	2	Residence halls open—1 p.m. Dining hall opens—5 p.m.
	3	Classes begin—8 a.m.
Feb.	15	Winter term classes end—5:30 p.m.
	16-19	Final examinations
	19	Winter recess begins—4:30 p.m.
	20	Dining hall closes—9:30 a.m. Residence halls close—12 noon

SPRING TERM (50 class days)

Feb.	27	Residence halls open—1 p.m. Dining hall opens—5 p.m.
	28	Registration—8:30 a.m.-5 p.m. Classes begin—8 a.m.
Apr.	6	Spring recess begins—5:30 p.m.
	7	Dining hall closes—9:30 a.m. Residence halls close—12 noon
	12	Residence halls open—1 p.m. Dining hall opens—5 p.m.
	13	Classes begin—8 a.m.
May	12	Spring term classes end—5:30 p.m.
	13	Reading Day
	14-18	Final examinations
	22	Commencement

JUNIATA COLLEGE BULLETIN

Catalog Issue 1976 / 1977

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The provisions of this bulletin are not to be regarded as an irrevocable contract between the student and Juniata College. While every attempt has been made to assure correct and updated information, the College reserves the right to change any provisions or requirements at any time within the student's term of attendance.

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JUNIATA COLLEGE is an independent, privately supported, coeducational institution committed to providing a liberal arts education to qualified students regardless of sex, race, religion, creed or color. Its policies comply with the requirements of Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and all other applicable federal, state and local statutes, regulations and guidelines.

Class of 1879.

L. B. KLINE,
PHOTOGRAPHER,

518 WASHINGTON ST.,
HUNTINGDON, PA.

JUNIATA IN BRIEF

Juniata, a century old in 1976, is an independent liberal arts college founded by several members of the Church of the Brethren. The founders — Dr. Andrew Brumbaugh, a Huntingdon physician, and his publisher-cousins, Henry and John Brumbaugh — had in mind a normal school that would, by stages, attain full college status.

Together the three engaged Jacob Zuck, a young school teacher, to conduct classes in a cramped second-story room of the Brumbaugh printshop on Washington Street. Under Zuck's tutelage, the Huntingdon Normal School began on April 17, 1876, with three students. Coeducational and nonsectarian, it was pledged to preparing its two-year graduates for "teaching, for life, and for entering college."

In 1878, the school was chartered as a joint stock project under a new name — Brethren's Normal College. Though called a "college," it was still basically committed to training teachers. A classical curriculum was introduced at this time but attracted no students for years. In the spring of 1879, Founders Hall was built on the present campus site in the west end of town. Land for the original three-acre plot was donated by local citizens.

By the mid-1890s the College had come of age. In 1894 its name was changed finally to Juniata, the Indian word (meaning "beautiful") for the nearby river. Then in 1896, under President Martin Grove Brumbaugh, later Pennsylvania's World War I governor, Juniata won accreditation as a four-year liberal arts college. It awarded its first A.B. degree the next year, and in 1920 the B.S. degree became available.

The joint stock set-up ended in 1908, when Juniata was rechartered as a nonprofit institution. Since then its control has been vested in a self-perpetuating board of trustees.

From humble origins Juniata, now claiming some 6500 alumni, has risen to a place of prominence in higher education. A recent study revealed that between 1920 and 1961, Juniata ranked exceptionally high in the percentage of its graduates who earned doctoral degrees: twenty-fourth nationwide and fourth among all Pennsylvania schools. But equally noteworthy is the fact that since 1961, the number of Juniatians with doctorates has all but matched the figure for the study period.

Over the years, then, Juniatians have gone on to the best graduate and professional schools for further study. They have regularly received choice assistantships and fellowships. Some have been Fulbright and Root-Tilden Scholars; others have gained National Science Foundation and Rockefeller Theological Fellowships — to cite a few of the more prestigious awards.

In the last few years Juniata's success in placing

elementary and secondary school teachers has been outstanding. Percentage-wise, its results are well above the average of all Pennsylvania colleges and universities. Many Juniata graduates are admitted to the leading medical, dental and veterinary schools, and are found in key positions in business, industry and community services.

Almost wholly residential, Juniata has an enrollment of about 1100 undergraduates and seeks to maintain a favorable balance between men and women. By deliberate policy it has always been a small college.

In the best tradition of its founders, who advocated "quality rather than quantity," the student body is a select one. The faculty of 90 is dedicated to teaching, and of its members, half hold earned doctoral degrees.

Juniata now occupies 100 acres with 27 buildings, 12 of which have been built since 1960. Near the main campus are the 170-acre Baker-Henry Nature Preserve and a 55-acre recreational site on the new Raystown Lake, both owned by the College, and a 385-acre environmental studies field station, leased from the Army Corps of Engineers. The latter facility, one of the finest of its kind in the East, is also on Raystown Lake, the largest lake lying wholly in Pennsylvania.

The College's much-heralded curriculum is supported by a strong library, whose membership in the Area College Library Cooperative program gives it the resources of many large university libraries. There are well equipped laboratories and classrooms, and the College is fortunate in having eleven residence halls which are conducive to study and personal growth.

Juniata is accredited by the Middle States Association of Colleges and Secondary Schools and is on the approved list of the American Chemical Society and the American Association of University Women.

The College is recognized by the Pennsylvania State Board of Education, The Pennsylvania Board of Law Examiners, and the Board of Regents of the University of the State of New York.

Assets

As of June 30, 1975, Juniata's total assets were valued at some $24,690,000. These included the physical plant, with a book value of $15,000,000; endowment and similar funds, with a book value of $7,560,000; and other funds totaling $2,130,000.

For the 1976-77 academic year, it is anticipated that the total operating budget of the College will exceed $5.8 million. A significant percentage of the current fund is provided by gifts and grants and by income from the endowment.

ACADEMIC PROGRAM

Educated persons should be capable of regulating their own lives, not only with regard to decisions made in the context of their vocations, but within the larger contexts of their lives as citizens and social beings. An institution in the liberal arts tradition must take as its goal not only provision of the best possible training for a career, but also provision of the skills and knowledge graduates need to make contributions to the total community. At Juniata, we believe the *procedures* of acquiring an education are an important part of the educational process. Therefore, certain educational decisions are made by each student, who uses information from faculty advisers and intellectual skills acquired during the first few terms at the College.

The first term of the freshman year is arranged to offer students an understanding of the process of inquiry and to increase the awareness that their values, consciously or unconsciously held, affect the decisions they make. At the same time, students are brought into close contact with faculty members who can be of great help as plans are made to fulfill educational goals.

An educated person should be able to think independently about intellectual and moral issues. Juniata's program is further designed, therefore, to promote and develop the habits of mind and communications skills needed in making decisions. Students wrestle with profound issues of human values, not only as dealt with in the past, but also as they affect current thinking in a student's chosen field. Each student eventually confronts his or her *own* values, and is asked to deal with these values in a critical manner.

In the brief time that this educational plan has been in effect at Juniata, it has already won notable recognition, including significant financial support from public and private foundations. This assistance enables Juniata to maintain its tradition of success in educating young people who later make important contributions to our society.

DEGREE REQUIREMENTS

In order to receive a degree from Juniata, a student must fulfill certain specific requirements. There is, however, great flexibility within the academic program set by these requirements, and as a result, each student may pursue a program tailored to his or her individual intellectual needs and educational goals. The student must satisfactorily complete all of the following:

1. A minimum of 34 units of study, including the special units described in the remainder of this list.
2. One unit entitled *Modes of Thought and Methods of Inquiry,* to be taken in the freshman year.
3. One unit of a *Freshman Seminar,* also to be completed in the freshman year.
4. The *Writing Program* for one unit of credit in the freshman year.
5. Five units of *General Education* in the following pattern:
   a. Two units at the 200 level, to be taken in the first two years.
   b. One unit, *Human Existence — Analytical,* normally taken in the senior year.
   c. Two units of any other offerings identified by the College as *Value Centered Units.*
6. A *Program of Emphasis,* consisting of 15 units having a justifiable and coherent relationship.
7. The last three terms in residence at Juniata.

Note: A modified set of graduation requirements has been adopted for the class entering in 1977. For further information, the Admissions Office or Registrar's Office may be contacted.

A student who can demonstrate, with evidence, that he or she has had experiences comparable to *Modes of Thought and Methods of Inquiry, Freshman Seminar,* a 200-level *General Education* unit, or *Value Centered Units* may petition the Curriculum Committee for a waiver of the respective requirement. A third-level language course from Juniata may also be used to satisfy one of the 200-level *General Education* requirements, as such courses have been specifically designed to meet the goals of the *General Education* units.

A unit is a course of study designed by a faculty member, or by a student in consultation with a faculty member, which is subsequently approved by the Curriculum Committee. Some units are taught in lecture format, others by discussion, and still others by experience in the laboratory or in field work. For purposes of transfer, the unit is equated to 3.5 semester hours.

Program of Emphasis

The *Program of Emphasis* consists of 15 units of related studies. It is planned by the student in consultation with two faculty advisers. A rationale written by the student is required for the original program and for subsequent changes. After approval is granted, a copy of the rationale and the attached program are filed in the Registrar's Office as part of the student's permanent record.

The *Program Review* is an examination taken by students seeking graduation honors.

The *Program of Emphasis* includes units other than those required and may also include independent studies and tutorials approved in a manner determined by the Curriculum Committee. Students with particular career goals in mind should consult appropriate faculty advisers early in the freshman year, since the design of a *Program of Emphasis* is influenced by the goal or career.

General Education

General Education is designed to develop mental perspective by raising fundamental questions regarding the whole of knowledge and values which are not the province of any single department. *General Education* is more than the breadth achieved by simply studying a variety of subjects. The *General Education* requirements consist of five units earned after the first term of the freshman year: two units at the 200 level; one unit of *Human Existence — Analytical;* and two units from another group offered by various departments and identified as *Value Centered Units.*

The Freshman Year

Modes of Thought

Every entering freshman, before he constructs his *Program of Emphasis,* is required to take *Modes of Thought and Methods of Inquiry.* This course introduces the student to the variety of methods utilized by the various disciplines in approaching their particular subject matter (see p. 43).

Students will study the assumptions underlying the ways the disciplines establish what is called fact or truth, and will learn to recognize the limitations of each way. From such a perspective, students will have a better notion of the methodologies of various academic fields, and this should be of great help when designing a *Program of Emphasis.* To insure the representation of many scholarly viewpoints, the course is taught by a team of faculty members.

The Writing Program

The *Writing Program* shares a common goal with *Modes of Thought and Methods of Inquiry*: helping students to think in a logical fashion and to

express themselves clearly. In the *Writing Program,* students receive assistance each week in individual sessions with an instructor, and also in a workshop with a small group of students. Each engages in an analysis of, and practice in, the writing of expository and argumentative prose. The *Writing Program* normally requires 20 weeks for its completion. Students who believe they have writing competency before they arrive as freshmen must demonstrate this competency to the Director of the Writing Program by submitting to the Admissions Office results of the Advanced Placement Examination in English of the Educational Testing Service. Results must be submitted prior to coming to Juniata. Students who are unable to achieve competency in the 20-week program must continue with the *Writing Program* during the last term of the freshman year. Periodic competency tests will be given during this term (see p. 43).

In addition, an alternative *Writing Program* newly designed by the English Department will be offered during the 1976-77 academic year and will involve a number of freshmen.

Freshman Seminar

In order to insure that an incoming freshman has a faculty member with whom he or she can relate, Juniata provides a *Freshman Seminar*, which consists of a group of students who meet with a faculty member in a structured academic environment.

In this way, the faculty and students can come to know each other, and the student can see the faculty member as a scholar and research person. A professor will be, as a consequence of his or her knowledge of the student, in a better position to assist each freshman in developing a *Program of Emphasis* and will, therefore, become one of two advisers for the remainder of the student's college career, unless the student arranges for a change of advisers (see p. 43).

An additional requirement for the successful completion of the *Freshman Seminar* is the initial submission of a *Program of Emphasis.*

Other Courses

Each freshman chooses an elective unit for his or her entering term. The unit is selected with the aid of an adviser either before the student arrives on campus or within the first few days after arrival. For students who wish to enter highly structured fields, it is important to seek good faculty advice for this first course. After the beginning of the first term, the Freshman Seminar leader acts as adviser.

It is also desirable for freshmen to take at least one of their 200-level *General Education* courses. Two of these units must be completed within the first 18 units attempted.

The Calendar

The Juniata calendar currently consists of three 10-week terms. A study is presently underway, however, to determine what kind of calendar will be most effective in the future.

Summer Sessions

Juniata conducts two Summer Sessions designed for a wide variety of students. The unit offerings are, for the most part, the same as those available during the three regular terms.

Secondary school graduates who wish to begin their freshman year during the Summer Sessions should apply to the Director of Admissions. Candidates for degrees at other colleges and all other applicants should contact the Director of Summer Sessions for detailed information.

PROGRAMS FOR SPECIALIZED STUDY

Juniata is eager to aid students in preparing for a variety of careers. Many enter college with career choices firmly made. Others, undecided, enter college seeking an introduction to several fields of knowledge in order to make a sound decision about a choice of career. A program of emphasis can be oriented toward specialized study in a particular area which leads toward a professional or vocational goal. The following sections illustrate a number of areas in which specialized training is necessary and a program can be developed. Before designing a program of emphasis in any of these areas, the student should consult the program adviser for assistance in developing a course of study which will fulfill his or her particular goals.

Business

Adviser: Assistant Professor Wise

For students interested in preparing adequately for careers in today's business or industry, the strongest base is provided by a liberal education. Various units throughout the College offerings can be combined to build a program designed to meet the goals of the student, and specific units in accounting, statistics, computers, management and economics are always available. More advanced work in these areas is provided as needed for an individual program.

Of special interest to business students is the provision for off-campus study. Through a cooperative program with local industries, opportunities are available for extended on-the-job experience under the joint guidance of College and in-plant personnel. Such internships are generally for a full term.

Chemistry, Industrial or Research

Adviser: Professor Wampler

The College offerings provide excellent training opportunity for students who plan to work in industrial or government chemical laboratories. Those who build their programs to obtain certification by the American Chemical Society will be especially well prepared professionally and will find the certification advantageous in their careers as chemists.

Communications

Adviser: Associate Professor R. Church

"The ability to read and comprehend what one reads and the ability to translate orally are essential to communication. Communication is essential to controlling and directing people, and people (with the help of machines, but, I repeat, *people*) get the job done. Reading and speaking and people are the ingredients or the raw materials in a business. A man who can use good, plain, understandable English is worth more to me than a specialist." An official of a large food products corporation said that not long ago. Of course, a program in communications may be designed for a career in journalism, radio, television or public relations, but such a program, as the opening quotation indicates, is equally effective as preparation for careers in government, law and business. At Juniata, students can build programs in communications which stress the use of the language, reading, writing, speaking and interpreting and which, in conjunction with their other liberal arts courses, will be excellent preparation for a wide variety of careers.

In addition, Juniata supplements regular units with a variety of intern programs which offer on-the-job training in areas such as newspaper work, public relations, advertising and development.

A program in communications should include both the narrowly technical courses (professional writing, speech communications) and broader preparation in such areas as history, sociology, psychology, political science, economics, languages, literature and the sciences. Such breadth and depth are the hallmarks of an educated person.

Engineering

Adviser: Assistant Professor Engle

Juniata participates with the School of Engineering, Columbia University, with Georgia Institute of Technology, and with Washington University, St. Louis, in cooperative plans for training in engineering. The purpose of such an arrangement is to produce engineers who are educated in the fullest sense, rather than specialists who are competent only in a narrow technical field.

The student takes three years of undergraduate work at Juniata. Upon recommendation of the adviser, he then transfers to the engineering institution for two additional years of engineering study. Upon successful completion of the five years of study, the student receives two degrees, a bachelor's degree from Juniata and an engineering degree from Columbia, Georgia Tech, or Washington.

Environmental Sciences

Advisers: Associate Professors R. Fisher, Gooch and Washburn

Programs in the environmental sciences usually center in ecology and the biological sciences. Particular programs in ecology, aquatic biology, oceanography, environmental geology or chemistry, and combinations with computer science, economics and political science, can be tailored to the needs of individual students in consultation with their advisers. Juniata maintains affiliations with the Duke University Marine Laboratory and American University for off-campus course work in the environmental sciences. Field experience is also recommended at the Juniata field station on Raystown Lake, 20 miles from campus, or by taking summer courses in field biology or geology at any of several recommended inland and marine facilities.

Forestry

Adviser: Associate Professor R. Fisher

Professional and scientific programs of study in forestry are offered in cooperation with the School of Forestry, Duke University. The student spends three years in residence at Juniata and an additional five semesters at Duke. Upon satisfactory completion of two semesters at Duke, the student will have earned the B.S. degree from Juniata, and upon completing the remainder of the program, will be awarded either the M.F. or M.S. degree from Duke, depending upon the nature of the program.

International Studies

Advisers: Assistant Professors Vocke and Jaeger

An international studies concentration is interdisciplinary in nature, with students normally taking courses in a number of academic areas. History, political science, economics and foreign languages often constitute a large portion of the program; however, there are many other courses within the College offerings which relate to this concentration. Depending on the student's interests, international studies programs can be de-

veloped to focus on varying features of the international environment, i.e. economic and business, social and political, cultural and linguistic, or some combination of these three groups. Specific courses and career opportunities can be discussed with advisers and molded to student interests.

A concentration in international studies not only allows students to become familiar with another society through their work at Juniata, but may also involve some study abroad. This type of academic and living experience, which personally acquaints students with different political, social and cultural environments, is recommended. Since most (but not all) English language experiences take place in the British Isles, special attention should be given to acquiring the appropriate language facility by those wanting to study in Mexico, Spain, Russia, Germany or other countries. Some of the opportunities are listed under *Off Campus Programs*.

Law

Advisers: Professors Crosby and Klug, Assistant Professor Vocke

The pre-legal student should aim at a broad undergraduate experience in the social studies and humanities. It is essential that the student interested in law should have a thorough command of English, an extensive acquaintance with logical methods and the use of such methods, considerable training in the use of source materials and research methods, and a critical understanding of the human institutions and values with which the law deals. Although the student may develop any program of emphasis which will best suit his or her particular talents and interests, the experience of others indicates that English, history, political science and economics are the most suitable choices for consideration.

Medicine and Dentistry

Advisers: Health Professions Committee

The student interested in a career in the medical or dental professions will have to meet the specific requirements for admission to a professional school. These vary from school to school, so the student should work closely with a member of the Health Professions Committee as he or she prepares a program of emphasis. The program at Juniata provides exceptionally sound preparation in the sciences and permits the student to attain the breadth of knowledge essential to a career foundation in a health-related area.

Other professions for which students may receive the undergraduate part of their education include veterinary medicine, osteopathy, optometry, podiatry, physician's assistant and physical therapy. Recommendations for admission to professional schools will normally be made by the Health Professions Committee.

Medical Technology

Adviser: Professor Zimmerer

To qualify for admission to a school of medical technology approved by the Council on Medical Education and Hospitals of the American Medical Association, a student must present 26 units of college work, including the units specified by the medical technology program. A student completing three years, including all college degree requirements at Juniata, may receive credit for the fourth year and qualify for a degree upon satisfactory completion of the course in medical technology at an approved school. The College has affiliations with Abington Memorial, Altoona and Lancaster General Hospitals and with the Princeton Medical Center.

Ministry and Religion

Advisers: Associate Professor Nieto and Rev. Murray

At Juniata, pre-theological students are not required to concentrate exclusively in religion. However, a basic core of courses in religion is strongly recommended as part of a general liberal arts program that also includes basic studies of history, literature and philosophy. Specialized programs relating religion to the social or natural sciences are also possible. Since theological study is highly verbal in nature, students are especially encouraged to develop collateral strengths in language study, writing and speaking, or drama.

Peace and Conflict Studies

Adviser: Professor Kipphan

Juniata's program of Peace and Conflict Studies is currently developed around a core of units exploring causes, morphology and consequences of conflicts as well as methods of conflict resolution. In addition to taking already available Peace Study units and closely related courses, the interested student may want to pursue specific issues in the field through tutorials and independent studies.

A program of emphasis in Peace and Conflict Studies requires a full exposure to the subject matter and methodology of the social sciences and humanities (e.g., sociology, psychology, political science, history, religion and philosophy).

Many other students will decide to enrich their academic studies by including Peace Study units in their programs of emphasis or using them as electives or value centered units.

Units available in the program include Introduction to Peace Studies, International Politics, War and Conscience in America, The Trials of the Major Nazi War Criminals At Nuremberg, Tolstoy: His Life and Message, and Friends and Brothers: Studies in Historic Peace Churches (Brethren, Mennonite, Quaker).

Social Work

Adviser: Mr. F. R. Reilly

The Juniata student who wants to help people deal with and solve social problems may prepare for a career in the social work profession. The student's program of emphasis will reflect an interdisciplinary concentration, combining a core of units from the social sciences with specific units in social work and social welfare. Such a program also allows for a focus on a particular area of inquiry (e.g., corrections or mental health) that may complement the social work interest.

Of great importance and concern to the social work student is Juniata's Social Agency Internship program. In cooperation with a variety of social service agencies, this program is organized to provide senior students with the opportunity to integrate and apply the skills and knowledge gained in the classroom with the daily functioning of the worker in the field.

Teaching

Advisers: Professor Crouch, Assistant Professor Woodrow

A student at Juniata can prepare for teaching in the public schools in elementary education and in most of the academic subjects in secondary education. A student should design his program of emphasis to meet the state requirements for certification. Such a program normally includes the basic professional units in the education department, including student teaching and work designed to acquaint him or her with the techniques and materials for classroom instruction. Other

opportunities which can enter a program include participation in a teacher aide program, while activities such as field trips to local schools, assigned observations, and tutoring are also useful.

A student who has built a program of emphasis which satisfies the competencies set up by the state is eligible for certification by the Pennsylvania Department of Education. Through reciprocal agreements, the student can also qualify for certification in many other states.

OFF CAMPUS PROGRAMS

A number of programs are available to enrich the education of Juniata students by providing a term or a year of study at institutions with which the College maintains cooperative arrangements.

Programs of Study Abroad

Along with five other colleges associated with the Church of the Brethren, Juniata cooperates in a program of study during the junior year known as Brethren Colleges Abroad. At present the program is conducted in Germany at Phillips-Universitat, Marburg/Lahn, in France at the University of Strasbourg, and in Spain at the University of Barcelona.

Students receive six weeks of intensive language instruction upon arrival abroad and prior to enrolling for courses at the foreign university. It is the intent of the program to provide the equivalent of a full academic year of work. Students should have had at least three to five units of college-level study in the language of the country to which they go. Further provision for orientation in the language, as well as in the culture generally, precedes the opening program in the fall. In addition to an adequate knowledge of the language, the qualifications include high general academic ability, emotional stability, intellectual initiative, the ability to participate constructively in the life of a small group, and the personal attributes of a responsible and scholarly representative of America abroad.

Information about the program and applications for admission may be obtained from Associate Professor Dolnikowski, the Coordinator of BCA. Students may also study abroad under other programs sponsored by colleges or universities with whom Juniata does not have special arrangements. Information may be obtained from the Chairman of the Committee on Studies Abroad. Qualifications for admission to these programs are generally the same as those for the BCA Program.

Duke Marine Laboratory Program

In a special arrangement with the Duke University Marine Laboratory at Beaufort, N.C., a select group of Juniata students may take part in an intensive five-week program studying the physical, chemical, geological and biological aspects of the marine environment. Students must apply to Associate Professor Gooch for admission to the program and consult with the Dean of Academic Affairs about financial arrangements and living adjustments.

United Nations Semester

Juniata participates in the program known as the United Nations Semester conducted by Drew University, Madison, N.J. Although this program is of special interest to students of political science and international relations, it is open to students concentrating in any field of study. Through direct contact with agencies and persons within the United Nations, the student comes to know and

understand the intricacies and functioning of international organizations.

The program combines classes three days per week on the Drew campus with seminars and research conducted two days each week in facilities immediately adjacent to the United Nations headquarters in New York City. In the campus part of the program, the student may choose three courses in any field in order to satisfy his or her normal program needs and interests.

Ordinarily only juniors are eligible. The recommendations of the Dean of Academic Affairs and the Chairman of the Department of Political Science are required. Application is made through the latter.

Urban Semester

The Urban Semester program, normally planned for the junior year, is open to students regardless of academic field. Through cooperation with American University (Washington, D.C.), the Great Lakes Colleges Association's Philadelphia Urban Semester, and the College of Wooster's Urban Studies Program, students may spend a semester in one of the nation's major metropolitan centers, gaining firsthand insight into the issues and problems confronting our cities and exposure to possible vocations. Blending theory and direct experience, each program includes as its major part a supervised placement/internship, usually four days per week, in businesses, agencies, medical facilities, political offices or schools, among other possibilities. In addition, participants take part in seminars and/or research projects and may prepare papers as an academic complement. Application is made through the Urban Semester Coordinator, whose recommendation plus that of the Dean of Academic Affairs is required.

Washington Semester

Under a cooperative arrangement with the Washington Center for Learning Alternatives, Juniata participates in an internship program in the Washington, D.C. area. Under this program, the student is placed in a public office or agency, a congressional office, or a public interest organization such as Common Cause or the Environmental Policies Center. Normally juniors are recommended. The approval of the Dean of Academic Affairs and the Coordinator in the Department of Political Science is required. Application is made through the latter.

ACADEMIC POLICIES

Normal Program

A normal academic program consists of nine units per academic year. Excluding Advanced Placement credit, freshmen are not normally permitted to receive credit for more than nine units that academic year. A freshman desiring to take more than three units in the Third Term must fulfill two special requirements: (a) satisfactory completion of all First and Second-Term units attempted and (b) approval of his or her freshman seminar leader and/or other such faculty who have supervised his or her work as determined by the Registrar. There will be an overload charge for the tenth unit. Under some conditions, students who have fulfilled

the Writing Program requirements may apply for an additional unit in the Second Term. A student who must remain in the Writing Program during the Third Term may register for only two additional units during that term.

The normal program for an upperclass student is also nine units per academic year, three per term. An upperclass student may take a tenth unit as an overload by payment of an overload charge. The upperclass student who wishes to take eleven units must have an outstanding academic record, including satisfactory completion of all units attempted, and must obtain the written consent of his or her program advisers. A tuition charge is also made for the eleventh unit. No upperclass student may ordinarily take more than eleven units per academic year.

In addition, any more than three units in one term is considered an overload for that term and a charge will be made.

If a student registers for an overload and then withdraws, a refund will be given based on the time spent in the unit and following the refund policy explained in the chapter on student finances.

Some units extend over more than one term. All units, however, must be completed within one academic year, not including the summer.

All special arrangements for program must be made in the Office of the Registrar. In the Summer Session the normal student load is one unit during the three-week term and two units during the six-week term.

The normal course change period is during the first week of the term for most units. For 20-week units, the course drop period is two weeks from the first day of classes. For 30-week units, the course drop period is three weeks from the first day of classes.

Independent Study

A student may wish to pursue studies not listed as unit offerings. In such a case, independent study may be appropriate. Requests for independent study are handled by the Curriculum Committee through the Office of the Registrar.

1. Credit by Examination. Students may be given credit for some units without participation in class meetings but by meeting all other requirements of the units. In order to determine if a unit is available for Credit by Examination, the student should consult the faculty member who is currently teaching the unit. If the unit is not currently being offered, a faculty member who has taught the unit at least once in the last three years may conduct the Credit by Examination unit. The approval of the faculty member is essential, since not all units lend themselves to Credit by Examination (e.g., those dependent on discussion or field trips).

After obtaining the consent of the faculty member, the student must register for such a unit, using forms available in the Registrar's Office, at the beginning of the term in which credit is to be obtained. The instructor will designate a syllabus, text, or other materials required and will submit to the Registrar the conditions which must be fulfilled (i.e., examinations, papers, and interviews). Credit by Examination units are considered part of the normal load of a student. Units taken as an overload are subject to the usual overload charges.

2. Student Initiated Units. A student or a group of students may wish to pursue certain studies not described in the College catalog as certified units. In initiating such a unit, students should counsel with their faculty advisers on the intent and value of the proposed unit in relation to their overall programs. The student must secure a competent

faculty member who is willing to teach the unit and, together with the faculty member, fill out a form available from the Office of the Registrar. Students must submit proposals to the Registrar two weeks prior to registration, and the Registrar may consult the Curriculum Committee before approval is given.

In cases where the proposed faculty member is working outside of his discipline, the Dean of Academic Affairs or one of the Assistant Deans must approve the choice of faculty member. If more than one student is applying for the unit, the students must obtain a tentative scheduling commitment from the Office of the Dean. Student initiated units must be completed within the term in which registration occurred, except as permitted by the usual policy on incomplete work. The Registrar will notify the student of approval or rejection, and upon approval the student may register for the unit in the Registrar's Office during the unit change period.

A student may individualize his study in two ways: *Independent Study* — wherein the great bulk of the responsibility for the design and execution of the unit rests with the student, and *Tutorial* — wherein the instructor designs the unit in consultation with the student and is responsible for the administration of the unit. In the Tutorial the instructor and student work closely on a regularly scheduled basis involving discussions, demonstrations, explanations and evaluations.

Advanced Placement

Incoming freshmen may be granted Advanced Placement with or without credit between the time of their acceptance by Juniata and the end of their first term in residence. A student applies for Advanced Placement in the Office of the Registrar. The Department Chairman and the instructor who teaches the unit for which Advanced Placement is sought will decide whether the work submitted is equivalent to the unit offered at Juniata. To establish the student's competence in such a unit, the evaluators may use a standardized test, individually designed tests, or a combination of both. Examples of standardized tests are the College Level Examination Program and the Advanced Placement Program of the Educational Testing Service. Advanced Placement with credit will be given to students who perform on the test at a level not lower than that of a *B*. In the case of satisfactory or marginal performance, the evaluators may decide to grant Advanced Placement without credit, thereby enabling a student to take more advanced units in the respective area. Advanced Placement credits are accepted with no grade attached and may be counted toward the completion of degree requirements.

High school seniors who believe they may qualify for exemption from the Writing Program may take the Advanced Placement Examination in English administered by the Educational Testing Service and have the results sent to the Juniata Admissions Office. The results will be evaluated by the Director of the Writing Program to determine if credit and/or advanced placement are possible.

Auditing of Units

Persons desiring to audit may make arrangements with the Registrar to attend one or more units without receiving grades or credit. The transcript does not carry notations of audited units. Permission of the unit instructor is necessary, and an auditing fee of $50 per unit must be paid in the Business Office. This fee is waived for students enrolled in a regular full-time college program, but

laboratory or studio fees are charged to all students auditing such units.

Grading Policies

Grade reports will be issued by the Registrar at the conclusion of each term to students and their advisers. Grades for units completed while a regular term is in progress are also distributed officially at the end of that term. Performance in a few units is graded **S** (satisfactory) or **U** (unsatisfactory), but in the majority of units, performance is given a letter grade.

A grade point average (based on *A* = 3.00) is computed for all letter-graded units in the program of emphasis. This is recorded on the List of Satisfactorily Completed Units (see page 21).

A indicates work of the highest excellence, showing a superior grasp of content as well as independent and creative thinking in the subject. A unit completed with this grade carries three quality points.

B signifies unusual achievement wherein the student reveals exceptional insight and ability. Each unit completed with this grade carries two quality points.

C is given for satisfactory achievement on the college level where the work of the course has been conscientious and shows no considerable deficiency in either quality or quantity. For each unit with this grade one quality point is granted.

D indicates that the work of the unit has for some reason been unsatisfactory, but is only marginally so.

F signifies work which is distinctly unsatisfactory at the college level.

Only grades of *A, B, C,* and *S* are considered satisfactory for credit toward a degree.

In addition to the foregoing grade designations, the following irregular grades are used as occasion may demand:

I (incomplete). At the discretion of the faculty member involved, a grade of incomplete may be submitted. This option, however, is to be used sparingly and only when the student has given a satisfactory explanation (such as extended illness, accidents, etc.) for his or her failure to complete a required piece of work. Otherwise, a student receives a grade of *F* for an assignment which is not completed. Simple preference on the part of the student for an extension of time is not regarded as sufficient cause for granting an incomplete. Upon the granting of an incomplete, the student must complete the work within three weeks of the beginning of the next term of the academic year or a grade of *F* will be automatically recorded. Any exceptions to this policy must be approved in writing by both the instructor and the Registrar.

W (withdrawal). Withdrawals from a unit will be permitted up to the scheduled mid-point of that unit with permission of the student's advisers. Withdrawal after that date will not be permitted except in unusual circumstances requiring written approval of both the instructor and the Registrar. Unofficial withdrawals from all courses are recorded as *F*. Withdrawals from class are considered unofficial if the student fails to make satisfactory arrangements at the Office of the Registrar. Withdrawals from overloads may be accompanied by partial refund of the overload fee according to the policy on refunds.

A few units have been designated by the Curriculum Committee as units which can be graded satisfactory or unsatisfactory. These units may be used in a program of emphasis, but will not be used in computing a grade point average for the program of emphasis.

Academic Standing

A student will be regarded as full-time for billing purposes if he or she registers for two or more units in each academic term. A student is regarded as making normal progress toward a degree if his program will, in principle, permit him or her to complete 34 units in twelve terms without registering for an overload.

In order to remain in good academic standing, a full-time degree student must satisfactorily complete or be making satisfactory progress toward completing at least two units per term. The full-time degree student who fails to complete satisfactorily at least one unit in a term may continue in the following term only with the permission of the Curriculum Committee, and then on academic probation. A full-time degree student who satisfactorily completes only one unit in a given term will be automatically placed on academic probation. A student on academic probation for the above reasons who does not achieve good standing in each of the next two terms in which he or she is enrolled as a full-time degree student will be dismissed. Notification of these actions comes from the Office of the Registrar.

A student entering Juniata as an underclassman must undertake *Modes of Thought,* a *Freshman Seminar* and the *Writing Program* at the earliest possible occasion. If the student fails to complete satisfactorily *Modes of Thought* or *Freshman Seminar,* he or she must repeat it during the next academic year. Students who have not satisfactorily completed the *Writing Program* by the beginning of the sophomore year are automatically dismissed. Additional repeats beyond those described above will ordinarily not be permitted.

Two of the first 18 units undertaken must be from among the 200-level *General Education* sequence. If a student fails to complete satisfactorily one or both of these units, he or she must make up the deficiency within the next two regular terms.

Students who may have had experiences comparable to *Modes of Thought, Freshman Seminar* or 200-level *General Education* may consult the Curriculum Committee through the Registrar to determine if a waiver may be possible.

The implementation of probationary requirements and the determination of the fulfillment of graduation requirements are duties of the Registrar. Development and interpretation of policies are the function of the Curriculum Committee.

Academic Honesty

Juniata expects that work produced by students represents their personal effort and that all work should be above reproach. Term papers and other work prepared outside of class should contain only the student's own words or, if words are quoted, words enclosed in quotation marks with complete footnotes indicating the source. Even when material is used without direct quotations, the source should also be given. False statements designed to earn a student the right to make up missed work and arbitrary control of data are also regarded as violations of academic honesty. All offenses are reported to the Office of the Dean of Academic Affairs and recorded there. He in turn reports these to the Office of the Dean of Student Services. The faculty member involved normally decides how to handle each case of dishonesty, unless the penalty exceeds failing the course or affects something other than grades. Under some circumstances, the case may be handled in the Academic Affairs Office or by a committee of the faculty.

Transcript

For purposes of employment, transfer, or further study, the College makes available a List of Satisfactorily Completed Units. This List will show all units completed with a grade of C or better. On this document, General Education units will be listed if they have been satisfactorily completed. Program of emphasis units will be listed with letter grades and with a cumulative grade point average if 7.5 or more graded units have been taken. Elective units will be listed with no grades. This List of Satisfactorily Completed Units may be obtained from the Registrar's Office. In addition, the document includes the synopsis of the educational goals of the student. The section on student expenses explains the transcription fee. (p. 29).

The Registrar's Office also maintains a complete record of a student's academic work. This record is available for inspection by the student. Official copies of the complete transcript are available to the student upon payment of the transcription fee.

Dean's List

At the end of each term the Dean of Academic Affairs announces the Dean's First and Second Lists. Normally, the letter grades of the last nine units taken are used to compute a grade point average. If this average exceeds 2.75/3.00, the student is eligible for the Dean's First List. If the average is between 2.67 and 2.74, the student is eligible for the Dean's Second List. An additional criterion is that no unsatisfactory grades may appear in the terms from which the letter grades were taken or in the term for which the list was calculated.

Honor Society

The Juniata College Honor Society is a group of junior and senior students who have been recognized for their academic and personal leadership on campus. Members are elected on the basis of outstanding achievement and contribution to the life of the college community. Seniors constitute the larger portion of the membership although a few juniors may be elected each year.

Leaves of Absence

Students desiring to pursue a program of study at another institution or to engage in other off-campus educational experience without severing their connection with Juniata may request a leave of absence. Leave of absence is granted for a limited period with the understanding that the student will return to Juniata at a designated time. A student who plans to take a leave of absence should consult the Registrar and the Dean of Student Services to learn the policies which apply to leaves of absence, and must take care in observing the senior year residency requirement for graduation.

JUNIATA
Economics and Business Administration
Legal Studies
JUNIATA

ADMISSION

Policy

The Admissions Office encourages students to apply to Juniata if they demonstrate the proper desire, motivation and maturity one needs to benefit from a four-year college experience. Such qualities are evaluated through the various application credentials.

While Juniata recognizes its responsibility to the constituencies to which it has been historically related, the College seeks to broaden its student population base to include a wide geographic representation with a variety of social and economic backgrounds.

The College reserves the right to determine which applicants shall be admitted. The selection of candidates for admission is made without regard to race, sex, religion, creed or national origin.

Procedure

Application forms may be obtained from the Director of Admissions, Juniata College, Huntingdon, Pa. 16652. The applicant should complete the form and return it to the Admissions Office. A fee of $15 by check or money order (made payable to Juniata College) must accompany the application. This non-refundable fee is used to cover part of the cost of processing the application.

A complete secondary school transcript must be sent from the applicant's guidance office noting all courses taken and grades received through the junior year. If known, a listing of courses to be taken in the senior year should accompany this transcript.

In addition, one personal evaluation form must be completed and returned to the college by a person (other than a relative) who knows the student.

Requirements

Applications may be submitted any time after completion of the junior year in secondary school. Priority given to credentials is as follows:

The Academic Record: Completion or anticipated completion of a secondary school program including sixteen college preparatory courses from an approved public, private or parochial school.

The Person: a) evidence of involvement in worthwhile extracurricular activities in both school and community; b) the guidance counselor's comments if school policy allows; c) one reference or recommendation (from a person other than a relative) which attests to the applicant's social preparedness for a collegiate experience.

The Standardized Testing: Test results of the Scholastic Aptitude Test (SAT) taken in the junior and/or senior year. The American College Test (ACT) taken in either the junior or senior year may be substituted for the Scholastic Aptitude Test where convenient. Foreign student applicants must provide the results of a Test of English as a Foreign Language (TOEFL).

Achievement Tests of the College Entrance Examination Board (CEEB) are *not* required for admission to Juniata.

Campus Visit

Although not a requirement for admission, it is strongly recommended that each prospective student visit campus and have a personal interview with an admissions officer as well as a campus tour with a student guide. This is the best way to evaluate any college, and in Juniata's case it is meant to serve as an opportunity to learn more about the college than can be gleaned from publications.

Appointments should be made in advance t visit campus any weekday between 9 a.m. and p.m. throughout the year; or on Saturdays from a.m. until 12 noon, September through May.

Early Decision

Students are encouraged to apply for admission consideration during the summer between th junior and senior years of secondary school. Thos who apply at this time and complete their appl cation requirements prior to September 1 of the senior year will be notified of an admissions dec sion within the first two weeks of September. An offer of admission given at this time will be con tingent upon the Candidate's Reply Date as de scribed below.

Rolling Admissions

This policy is continued throughout the admis sions year. Applicants are notified of an admis sions decision within two weeks following the re ceipt of all requested admissions credentials. An offer of admission granted in this manner is con tingent upon the Candidate's Reply Date.

Candidate's Reply Date

Applicants who are offered admission should no tify the college of their decision to accept or not t accept the offer on or before May 1 of the year i which they plan to enroll at the College.

A matriculation fee of $100 (payable to Juniat College) is required from the applicant to indicat acceptance of the admissions offer. This fee is no refundable.

Alternative Admissions Programs

Early Admission

Admission without a high school diploma is available on a very selective basis to superior students following the junior year of secondary school. Such students may apply to Juniata during the junior year of high school if they satisfy one of the following criteria:

1) All high school graduation requirements must be completed by the end of the junior year, or

2) Permission must be given by the high school authorities to enter college one year early with satisfactory completion of the college courses applied toward the remaining high school graduation requirements.

Winter Term or Spring Term Admission

This is offered to a limited number of students each year. Application procedures and requirements are the same as for Fall Term admissions although the date of the reply required in response to an admissions offer will vary).

Summer Session Admission

Any students offered admission for the Fall Term are welcome to begin their studies in either of the two Summer Sessions offered prior to that Fall Term. Attending both summer sessions would enable the student to acquire three units of academic work for credit toward a degree.

Summer Provisional Admission

This is offered on a selective basis to students applying for Fall Term admissions who demonstrate promise of academic maturity and motivation, although these may not be readily reflected in their credentials as presented.

Attendance in the second Summer Session (six weeks in length) is required. During this time, the student must register for one unit of academic work from selected offerings, and a final grade of C or better must be earned in the unit. At the same time, the student must take a non-credit developmental skills course and earn a passing grade.

Upon completion of the Summer Session, the student's credentials will again be evaluated with special attention given to the course work taken during this summer. The College will then decide whether or not to admit the student for the Fall Term.

Part-Time Students

Any person interested in taking coursework at Juniata as a part-time student (less than two units per term) need not apply for admissions consideration. The Registrar enrolls and registers all non-degree and degree-seeking part-time students.

Deferred Admission

This is designed for those students who wish to start their college studies a full year after graduation from secondary school. Application procedures and requirements are the same as for all other applicants. It should be noted on the application form that the student desires consideration under the Deferred Admission Program.

Transfer Students

Applicants for admission from an accredited community college, junior college or four-year institution are considered upon completing the application requirements listed for all students. In addition, the admissions office requires the following: 1) an official transcript of the college record, sent directly from the institution the student is attending; 2) a personal evaluation record

from the Office of the Dean of Students at the institution the student is attending, indicating acceptable academic and social standing.

Notification of an admissions decision is provided the applicant as soon as all credentials have been reviewed. Accompanying any offer of admission is a written evaluation of transferable credits. All situations not involving an Associate of Arts (AA) or an Associate of Science (AS) degree involve the transfer of previous academic work on a course-by-course basis. Courses with C or better grades are generally transferable if a similar course is offered at Juniata.

Applicants who transfer following the completion of the Associate of Arts or Associate of Science degree requirements in a recognized collegiate transfer program usually enter Juniata with junior class standing. Five of the eight general education units normally required of any student enrolled at Juniata are waived for those who enter with the AA or AS degree.

All transfer students offered admission to Juniata are eligible to apply for financial aid. The application procedure for financial aid is the same as that for new students.

Financial Aid

Any applicant offered admission to Juniata as a full-time degree-seeking student is eligible to apply for financial aid from the College. For further details about requirements and procedures, consult the student finances section of this catalog.

STUDENT FINANCES

STUDENT EXPENSES

At a time when inflation has touched all quarters of both national and private life, Juniata takes pride in maintaining a moderate level for student expenses. While the costs of services required for education have continued to rise, Juniata has managed to hold inevitable fee increases to modest values. The total fee for this year continues to rank in the lower half of those charged at comparable institutions in Pennsylvania.

Inclusive Fee

Charges are calculated on the basis of an inclusive fee covering most of the annual costs to the student. Additional fees, such as laboratory fees, are listed under Special and Occasional Fees.

	Resident Students	*Non-Resident Students*
Term I	$ 1,435	$ 975
Term II	1,435	975
Term III	1,420	970
Total	$ 4,290	$2,920

The inclusive fee is applied to instructional costs, academic services, student services, maintenance, and other costs of operation. A student paying the inclusive fee may take a normal load of two to three units per term, and a normal program for the three-term year may not exceed nine units. When permission is given to register for work in excess of the normal program, either in a given term or for the year, the cost will be $300 per unit. Non-resident students who do not participate in the college program, nor use facilities other than classrooms, libraries or other academic facilities, are charged at the rate of $400 when taking one unit.

The inclusive fee for resident students covers board charges and room rental during regularly announced periods when the dining hall and student residences are open. Resident students are required to board in the college dining hall. In addition, the fee includes the following services to the student:

Academic. Regular instruction, use of the library and computer facilities, academic and personal services, use of instructional facilities including energy costs, and physical education facilities.

Extracurricular. Admission to designated college-sponsored programs in Oller Auditorium, numerous campus social activities, all home athletic events, subscriptions to the *Juniatian* (the student newspaper) and the *Alfarata* (the yearbook), limited use of the infirmary, and accident insurance. Any student registered for less than two units may have the extracurricular privileges upon payment of a $60 fee per term.

Student Housing. Upperclass resident students choose their rooms on the basis of seniority. Freshmen are assigned rooms which are intermixed with those of upperclassmen. All students are expected to maintain residence on campus unless they are living with parents or guardians and are commuting from home in the immediate vicinity. A limited number of seniors, or students 21 years of age or older, may engage an apartment off campus and register as non-resident students with approval from the Dean of Student Services Office. However, these arrangements must be made in the spring prior to the year desired to be off campus. Students will normally not be permitted to move off campus during the academic year.

If a student desires to live alone in a residence hall room normally occupied by two students and the space is available, he will be charged an additional fee.

Special and Occasional Fees

Application Fee. Upon making application for admission to Juniata, the prospective student should forward the application fee of $15. This fee, partially covering the cost of processing the student's application, is not refundable, and cannot be applied toward the payment of other charges.

Matriculation Fee. When a student has been accepted for admission a matriculation fee of $100 must be paid on or before May 1 of the year of matriculation. Of this fee, which is not refundable, half is reserved as a contingency deposit and half as a registration deposit.

Contingency Deposit. Each student attending Juniata is required to make the contingency deposit of $50 which is included initially in the matriculation fee. Assessments of damage to or loss of college property are deducted from this deposit, and the student will be notified when such charges are made. When the balance of the contingency deposit falls below $30 at the beginning of a given term, the student is required to restore the deposit to the full amount of $50. Upon graduation or withdrawal for any reason, the unexpended balance will be refunded by check mailed to the student's home address after the close of the term.

Registration Deposit. Each spring, all upperclass students who plan to return for the Fall Term must deposit $50 with the Accounting Office prior to room selection and preregistration to indicate their intention of continuing at Juniata. This deposit is refundable for justifiable reasons until July 1.

Late Registration Fee. No student may register after the unit change period without permission of the Registrar and the instructor. Students failing to register at designated registration times are charged a late registration fee of $15.

Chemistry Laboratory Deposit. For the laboratories in chemistry, a booklet of tickets is purchased at the beginning of the Term for $10 or $15, depending on the laboratory. The tickets are to defray the cost of apparatus breakage and to purchase certain

expendable items. Refunds are made for unused tickets.

Laboratory and Studio Fees. Some units have laboratory or studio experiences as part of the course, while others may be *primarily* laboratory or studio work. A schedule of fees applies to these units. Such fees may be $10, $20, or $30, depending on the nature of the laboratory or studio.

Private Instruction in Music. Regularly enrolled students who wish to take music lessons for academic credit may register for lessons as part of their normal academic program. If the music lessons constitute an overload, the normal overload charge is made.

A student who does not desire academic credit for lessons may take them for $80 per term for one lesson per week; persons not regularly enrolled at the College may take music lessons at the same fee.

Auditing Fee. The fee for auditing one course is $50 per term. This fee is waived for students in good standing who are regularly enrolled in a full-time college program.

Student Teaching Fee. Students registering for student teaching in the Department of Education must pay a student teaching fee of $50.

Graduation Fee. The graduation fee due at the beginning of the final term is $35 and covers the expenses incident to a student's graduation from the College.

Transcription Fee. Each undergraduate student may request one copy of his or her official transcript without charge. Thereafter, a fee is charged on each new order at the rate of $1.50 for the first copy and $.50 for each additional copy. Graduates may order transcripts at the rate of $2.00 for the first copy and $1.00 for each additional copy ordered at the same time.

Placement Credential Fee. A student may have one set of his or her placement credentials sent to a prospective employer without charge. For each subsequent set required, a charge of $1.50 will be made.

Overload Fee. Students registering for more than nine units per year or three units per term will be charged an overload fee of $300 per unit.

Payment of Bills

The inclusive fee is due and payable at the beginning of each term. A student is ineligible to attend classes until a financial settlement has been made at the Accounting Office. A student cannot be granted honorable dismissal, end-of-term reports, a transcript of grades and credits, or a diploma until all College bills are paid in full.

Students who wish to pay College bills on a monthly basis may use The Girard Edu-Check Plan, The Knight Insured Tuition Payment Plan, or The Tuition Plan, Inc. Information may be obtained from the Accounting Office, Juniata College.

In addition, Juniata provides a pre-payment plan on a monthly basis. Further information may be obtained from the Business Manager.

Refund Policy

The College has expenses of a continuing nature. In view of these commitments, which are usually incurred on an annual basis, it is assumed that students once enrolled will remain for the term. For this reason, no refund is usually made to withdrawing students. If, however, withdrawal is required because of serious illness or other emergency reasons, and if official notice with explanation is made to the Dean of Student Services, refund of tuition and fees may be made as follows:

1. Tuition Refunds will be computed from the beginning of the week of registration according to the schedule below:

College Attendance	*Refund*
One week or less	80%
Between one and two weeks	60%
Between two and three weeks	40%
Between three and four weeks	20%
Four weeks or more	None

2. Room Charges are not refundable after the first week of the term.

3. Board Refunds will be prorated at the time of withdrawal for any reason.

4. Financial Aid. Withdrawing students who are receiving financial aid will cease to receive aid in the term in which withdrawal takes place.

5. Refund for Overloads. If a student withdraws from a unit which created an overload, the refund for that unit will be computed according to the tuition refund table above.

FINANCIAL AID

The financial aid program at Juniata offers a wide range of possibilities for assistance. Some scholarships are awarded in recognition of academic ability, while other forms of aid are based solely on financial need. Academic achievement scholarships have a maximum stipend value, whereas aid made available based on need is determined by analysis of family resources as evaluated through the College Scholarship Service analysis of the Parents' Confidential Statement. The College develops an individualized aid plan which can include one or more of the major means of assistance: gift aid, loans and student employment.

Application for Aid

New students may apply for financial assistance by completing the Financial Aid Application included with the Application for Admission. Applicants for aid based on financial need must also submit the Parents' Confidential Statement (PCS) to the College Scholarship Service (CSS). The PCS form, which can be obtained from the secondary school counselor, should be completed and forwarded to Princeton, N.J., with Juniata listed as the college to which the need analysis is to be sent. The aid application must be returned to the College and the PCS form must be mailed to Princeton no later than March 1. However, to be certain that all forms reach Juniata before available funds are assigned, the forms should be completed as soon as possible.

The College makes a decision regarding eligibility for financial aid soon after all admissions procedures have been completed and admission has been offered. If all aid application materials are received by the date of acceptance, the student

will receive notification of financial aid within about two weeks of that date. More extensive information concerning programs of aid available to Juniata students and application procedures for those programs is available in the Financial Aid Brochure. Copies of that brochure can be secured by contacting the Director of Admissions or Director of Financial Aid.

In addition, a listing of scholarships, loan funds and prizes is included in the Directory section of this catalog.

Each year, upperclass students must re-apply for financial aid and submit to Princeton an up-to-date PCS form if applying for aid based on need. Parents must also submit to the College a copy of their most recent federal tax return in support of the renewal application. All renewed assistance is based upon financial need.

Gift Aid

Gift aid is awarded in the form of scholarship or grant assistance and need not be repaid to the College. These awards are frequently provided by and named for generous supporters of Juniata.

Scholarships

Some Juniata scholarships, namely Brumbaugh-Ellis Presidential Scholarships and Alumni Annual Support Fund Scholarships, are awarded on the basis of academic achievement and leadership ability *regardless of financial need.* Students ranking in the upper one-fifth of their secondary school senior class and having demonstrated leadership ability through participation in student activities are eligible for such awards. To retain one of these scholarships, a student must maintain a minimum grade point average of 2.00 (B average) of a possible 3.00.

Other scholarships listed in the Directory section are named for donors and awarded on the basis of financial need and satisfactory academic performance. No specific grade point average standards are attached to those awards.

Grants

Grants are made to students who show clear promise of making a contribution to the campus community and of doing satisfactory academic work. To hold a grant once awarded, a student must remain in good standing and make satisfactory academic progress as outlined by the faculty. Guidelines are printed in the student handbook, *Pathfinder.*

Contingent upon federal government funding, Supplemental Educational Opportunity Grants are available for qualified students. Such grants are made to students who have exceptional financial need and who show academic and creative promise. The guidelines for the program are found in the Higher Education Act of 1965. During the 1975-76 academic year, 77 Juniata students were assisted under the Supplemental Educational Opportunity Grants Program in the amount of some $43,400.

Loans

Alumni and friends of Juniata have made funds available for student loans which are offered to students whose financial needs exceed the amounts that can be provided by scholarships and grants. Repayment schedules vary according to the amount borrowed.

In addition, the National Direct Student Loan Program is designed to assist students who require a long term loan to finance a college education. Aid is made available by the federal government through the Higher Education Act of 1965 as amended in 1972. Awards of up to $1,000 per year

are offered at an interest rate of 3% per annum, with repayment beginning one year after graduation. The repayment period is ten years. About 265 undergraduates at Juniata received approximately $135,000 from the National Direct Student Loan Program during the 1975-76 academic year.

Student Employment

Many job opportunities are available for part-time employment in offices and departments at Juniata. Each year a large percentage of the student body earns money to help defray College costs through employment on campus. Most positions are through the College program, but Juniata also participates in the federally funded College Work-Study Program (Economic Opportunity Act of 1964) and places students in part-time jobs both on campus and in public non-profit organizations in Huntingdon. Students who are assigned to work under the Work-Study Program must qualify according to guidelines established by the federal government.

Aid During Off-Campus Programs

Students who receive financial aid from the College and who participate in a cooperative program officially established between Juniata and other organizations may be eligible to continue receiving the aid while temporarily away from campus. However, a financial need analysis must be completed in the normal fashion to justify continuance of aid, and the student must certify his or her intention to complete the degree requirements at the College. Any aid will be based upon the cost of the cooperative program not exceeding the amount of costs at Juniata. Cooperative degree programs such as those in schools of engineering and medical technology are excluded from this arrangement.

Additional Educational Financing

In addition to the funds available through Juniata, the student should consider funds offered by other sources. Contingent upon funding, the federal government has made provision for the Basic Educational Opportunity Grants Program that provides grant assistance in the maximum amount of $1,400 per year. Application for the program is made through the U.S. Office of Education, and students attending Juniata are eligible.

For residents of Pennsylvania, a major source of funds is the Pennsylvania Higher Education Assistance Agency (PHEAA). This agency makes funds available by means of grants and loans. Pennsylvania residents who have completed the Scholastic Aptitude Tests will receive an application for the grant program from the PHEAA. Information regarding their family financial status is required, and a maximum grant of $1,200 is available on the basis of need. Additional information about this program may be obtained by writing to PHEAA, Scholarship Division, Towne House, Harrisburg, Pa., 17102.

The Guaranteed Loan Programs should also be considered. These programs are available in most states and enable the student to borrow up to $1,500 each year for educational expenses. The loans are offered by local banks with the backing of the state and federal governments. They are made with special interest rates and provisions for repayment.

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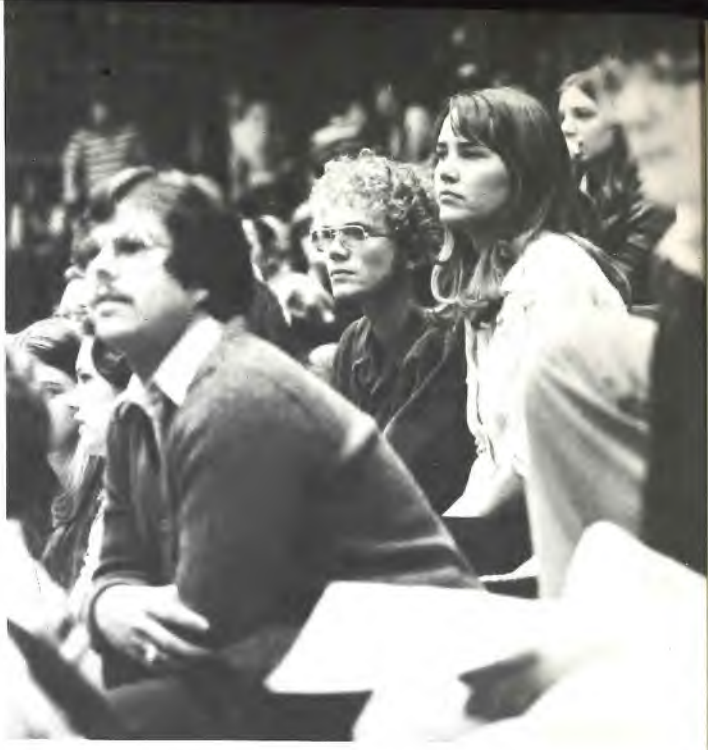

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CAMPUS LIFE

A constant objective of Juniata is to sustain an environment within which students can mature intellectually, socially and personally in a manner which promotes the goals of the academic program. Many opportunities for self determination are offered in campus life together with appropriate amounts and kinds of guidance to help the student understand his or her limitations and utilize his or her abilities.

STUDENT ACTIVITIES

Student Government

The Student Government is the primary governing and coordinating organization of the student body. Its electorate includes all students. The Student Government consists of the Executive Committee, the Senate, the Residence Hall Association, the College committee representatives, and class officers.

Students have a voice, and in most cases a vote, in all essential areas of college governance. Students are represented with full voting powers on all faculty committees and are appointed each year to sit as representatives on the standing committees of the Juniata Board of Trustees. Through these representatives, students have direct lines of communication to the persons who are responsible for the basic policies of the institution.

Center Board

The College Center Board has major responsibility for the planning, initiation, and promotion of campus activities for students. The Board, which is composed of nine students, a faculty member, an alumnus, and the Director of Programming, is also responsible for all general policy relating to the use of Ellis College Center and its programs. The five standing committees of the Center Board are the Fine Arts Committee, Recreation Committee, Concert Committee, Coffeehouse Committee, and Special Events Committee.

Student Organizations

To provide a focus for the varied interests of students, the following activities, clubs and social groups are officially recognized and sponsored by the College:

Music—Juniata Choral Union, Concert Choir, Pep Band, Concert Band, Chamber Orchestra, Wind and String Ensembles.

Professional Clubs—Barrister Club, Mathematics Club, Pennsylvania Student Education Association, Scalpel and Probe (biology and premedical), Society of Physics Students.

Interest Clubs—Camera, Outing, Chess, Juniata Speleological Society, International Cultural Relations, Black Students Association, Circle K.

Honorary Groups—Honor Society (scholarly attainment), Tri-Beta (Lambda Epsilon chapter of national biological honor society), Tau Epsilon Sigma (honor service club for students who have demonstrated academic ability, extracurricular participation and leadership), Delta Epsilon chapter of Alpha Phi Gamma (journalism), Varsity "J" Club (athletic letter winners), Sigma Pi Sigma (physics).

Religious Organizations—Juniata Inter-Varsity Christian Fellowship, Deputation Club.

Communications—The *Juniatian* (weekly newspaper), *Alfarata* (yearbook), WJC (campus radio), *Kvasir* (literary magazine).

Religious Opportunities

Although Juniata is chartered as a non-sectarian college, it was founded by members of the Church of the Brethren and has traditionally recognized the importance of the spiritual dimension as a part of individual growth. The College encourages students in their search to deepen personal faith and to find meaningful religious activities. Juniata's religious programs are under the guidance of the Campus Minister, who also willingly assists individual students. The Juniata student body reflects a diversity of religious faiths. The local community provides worship facilities for Protestant, Roman Catholic and Jewish students. The Stone Church of the Brethren, which is adjacent to the campus, is available daily for private meditation.

Cultural Events

A variety of outstanding cultural events is available for the entertainment of students and the enrichment of their college experience. Drama, dance, and vocal and orchestral music are presented in an annual Artist Series sponsored by the College and free to students.

Other presentations are offered by the Department of Music and the Department of Speech, Theatre and Film during the academic year. Some events involve student participation, while others may involve faculty and visiting artists. Major art exhibits are held in Shoemaker Galleries during the year under the sponsorship of the Department of Art.

Center Board also provides a series of outstanding motion pictures and exhibits in Ellis College Center.

Recreation and Athletics

The College promotes recreation, physical activity and athletic programs for all students. In addition to facilities for intercollegiate sports in baseball, football, track, wrestling, men's and women's basketball, cross country, golf, men's and women's tennis and field hockey, the College provides facilities for badminton, weight lifting, gymnastics and volleyball. In addition, there are club sports for men and women in judo, ice hockey, rugby and volleyball.

Intramural sports programs for men include touch football, soccer, handball, basketball, volleyball, softball, ping pong, tennis and track; and for women, field hockey, powder puff football, basketball, badminton, volleyball, softball and tennis. Between 85 and 90% of Juniata's students participate in intramural athletic programs.

Juniata holds membership in the National Collegiate Athletic Association and the Middle Atlantic States Collegiate Athletic Conference, and complies with the eligibility requirements of these organizations. As interest is shown and resources are available, opportunities for intercollegiate activities in addition to those listed above will be added to the program.

Beyond the facilities explicitly provided by the College, the Huntingdon area is rich with opportunities for hiking, fishing, hunting, boating, canoeing, rafting, swimming, camping, picnicking, skiing and golf.

SERVICES

Counseling

Through the office of the Dean of Student Services a wide variety of academic and personal and group counseling services is provided. Academic counseling includes the Comprehensive Pre-Freshman Program; workshops for freshmen, especially during the Fall Term to help them in their course work; and a series of evening sessions throughout the year to help students improve their study skills. In addition, the Student Services Office can aid students in gathering information about academic programs and in identifying appropriate faculty to go to for help.

Personal counseling is available to aid with problems students might have in making the transition from high school to college, with group living, or with finances, or to aid with any other concerns or questions students might have about their personal or social lives. There is also counseling for special groups such as veterans, women and foreign students, as well as organized groups which discuss personal and psychological growth and adjustment issues.

Career Planning and Placement

The Office of Career Planning and Placement acts as an agency through which students are assisted in identifying and developing their career interests and employment goals. It also introduces employers to qualified candidates. The Office of Career Planning and Placement can be effectively utilized as a resource center for career counseling throughout the undergraduate years.

Professional guidance is offered in preparation for the choice of career; the development of a credentials file; the choosing of a business, professional or governmental organization to be approached; and in preparation for a job interview. Interest tests and a variety of career literature are also available in the Office of Career Planning and Placement.

Health Services

Juniata is vitally concerned with the promotion of good health among its students and with the prevention of sickness and injury. The College Health Center, with limited services, provides treatment for minor ailments, routine care for chronic illnesses, and treatment for minor injuries. To provide the basic services, a day nurse and a resident nurse are regularly available and the College physician maintains consultation hours daily except Tuesdays. For comprehensive and specialized care, students are referred to the local hospital or to other medical facilities in the area.

All Juniata students are covered by an accident insurance policy which is part of the inclusive fee. For an additional amount, a hospitalization insurance policy may be purchased through the College. Details of these policies are available in the Accounting Office in Oneida Hall.

Any care not administered by the College Health Center or covered by the Juniata College Student Insurance Plan is the student's own financial responsibility.

New Student Orientation

There are two orientation periods for new students. In the summer, all pre-freshmen and their parents are invited to attend two-day summer workshops designed to introduce them to a variety of aspects of the collegiate experience and better prepare them to understand and cope with the normal changes and tensions through which everyone goes at this time. In addition, a variety of tests is given and counseling and course selections take place preparatory to the Fall Term.

At the beginning of the College year, freshmen and transfer students are asked to come to campus early for final orientation to the academic program, for registration, and for consultation with advisers. At that time students are oriented to additional aspects of their approaching collegiate and residential experiences.

Residence Halls

Since Juniata is a residential campus, most experiences involving self-determination and personal freedom must necessarily fit within the requirement framework of group living and group welfare. Recognizing that students have a variety of legitimate interests and needs in relation to group living, the College does not set in advance all rules for residence hall living, but allows variation and student determination within acceptable social guidelines. Thus, residence hall regulations can vary to some extent on a yearly basis.

Such a variety of dormitory regulations does not imply complete freedom of living. Student Services staff members are available in each residence hall to act as resource persons, to provide supervision and to help to maintain a healthy climate for community living. The live-in staff members, called Resident Assistants, are students working under the direct supervision of the professional Student Services staff. They have an important responsibility in helping to create and maintain a positive and meaningful atmosphere for living and learning. In addition, they help to interpret the goals and policies of the College.

All resident students are permitted personal discretion with regard to hours for coming and going within the residence halls.

Food Service

The College operates one large dining room, the Baker Refectory, located on the second floor of Ellis College Center. The Food Service operation is directed by Hallmark Management Services of Mansfield, O. Meals are all cafeteria style, served from two lines, with a salad bar and beverage bars located in the main dining room. The menu provides three basic daily meals which satisfy nutritional requirements and are balanced with a variety of optional items to satisfy different tastes. All resident students are required to take their meals in the College dining room. When a special diet is prescribed by a physician, the Food Service will make arrangements to meet the particular needs of that diet.

Mail and Banking Services

The College postal service is located on the ground floor of Ellis College Center. Students receive an assigned post office box for the time of their entire stay at Juniata. A deposit is required in order to receive a mailbox key. Students should use their post office box number as part of their Juniata address. Stamps and money orders are available at the post office and parcels can be mailed there during open hours.

The College also operates a deposit and check-

cashing service in the basement of the Ellis College Center. Students may open a deposit account for safekeeping of their funds for a nominal charge. Additional cash deposits and withdrawals can be made at no charge. A small charge is made for the handling of each check cashed or deposited in the account. Students who do not maintain a deposit account may also cash checks at the student bank for a nominal cost.

Motor Vehicles

Resident and non-resident students, with the exception of those students receiving financial aid from Juniata and/or PHEAA, are permitted to maintain cars, motorcycles, motor scooters and motor bikes on campus given proper registration of the vehicles. Parking spaces are assigned.

Standards of Student Conduct

Every community has certain regulations and traditions governing the behavior of its members in order to insure the basic rights of individuals as well as to reflect the practical necessities of the community. The College community is no exception and must provide the opportunities and protections which best serve the nature of the educational process. The College community depends perhaps even more than others on members who act maturely and responsibly. Only in such a community can an atmosphere be established which contributes to the objectives of liberal arts education. The basic principle of student conduct at Juniata holds that any behavior which infringes upon the rights, safety, property or privileges of others or which impedes the educative process of the College is unacceptable.

The policies and regulations of the College regarding student behavior are enumerated in the student handbook, *Pathfinder,* published by the Office of Student Services. The use of drugs, dishonesty in any phase of college work, disregard for the safety and property of others, and any behavior which reflects discredit upon the College are serious offenses, and can lead to disciplinary action.

The regulation of student life and the maintenance of personal and academic standards are ultimately in the hands of the administration and faculty, which retain at all times the authority to determine who should be admitted to and who should be allowed to continue at the College. Attendance at Juniata is a privilege, not a right. If any student has serious reservation about his or her ability to adjust to the traditions and general policies of Juniata, he or she should consider carefully enrollment at some other educational institution. The College reserves the right to amend any regulations at any time upon proper notification.

Discipline

It is the responsibility of the Office of Student Services to initiate, implement and supervise the disciplinary process for students. The Deans are often advised in disciplinary determinations by a student, faculty and administrative Campus Judicial Board, which hears cases assigned to it. The involvement of students in such decisions is consistent with the College's educational goals and its practice of student participation in institutional governance. The student handbook, *Pathfinder,* explains in detail the procedures followed.

JUNIATA
COLLEGE
FOUNDED
1876

THE CAMPUS

Few colleges have a more attractive appearance than Juniata. With 100 acres of elbow room, there is plenty of space for the 27 buildings on the main campus. The wide lawns are dominated by tall elms, oaks and a variety of maple trees, not to mention lots of squirrels.

The oldest building on campus is ivy-covered *Founders Hall*. Completed in 1879, it was the College's only building for a number of years. Today it houses administrative and faculty offices and the studios of WJC, the campus radio station. The Admissions Office is on the ground floor.

Three other buildings used extensively by all students are the *L. A. Beeghly Library, Memorial Gymnasium* and *Ellis College Center.*

The Beeghly Library was completed in 1963 and contains 150,000 volumes, plus study areas for more than 400 students. Almost all books, except for some rare and valuable editions in the W. Emmert Swigart Treasure Room, are accessible to students on an "open stack" basis. In addition, there are some 18,000 volumes and study space for 40 students in the *Myers Science Library* of the *Brumbaugh Science Center.* Moreover, Juniata and 16 other colleges and universities in Pennsylvania have formed a library cooperative, making it possible for students to obtain books kept in the collections of any of the participating colleges.

Juniata's home basketball games and wrestling matches, as well as a busy schedule of club and intramural contests, are played in *Memorial Gymnasium,* completed in 1951 and dedicated to all those from the College who served in World Wars I and II. On the ground floor are the main basketball court and bleachers seating 1200 persons, handball courts and the locker rooms. The main entrance and lobby lead to a mezzanine floor with additional playing space, the wrestling practice area, weight-lifting equipment and other facilities.

The *Old Gymnasium* is also used for intramurals and club activity. Outdoor athletic facilities include the *Raffensperger Tennis Courts,* four of which are lighted; the intramural fields, one of which is lighted; *Langdon Field* (baseball) and *College Field* (football and track).

Ellis College Center is one of the most imposing buildings on the campus with its huge entrance columns and three-story window area at the rear. Named for former Juniata presidents Charles C. Ellis and Calvert N. Ellis, it contains the bookstore, the campus post office, a student bank, offices for student publications and the Student Government, music listening rooms, a ballroom, lounges, the snack bar or "Tote," and the *Baker Refectory,* the main dining hall seating 680 persons. Coffee house programs and mini-concerts are frequently held in Tote.

Oller Auditorium, seating 900, is available for performances attracting larger audiences. Among the popular entertainers appearing on campus in recent years have been John Denver, Bonnie Raitt and Hall and Oates, and among the Artist Series programs have been the Warsaw Philharmonic, the Tokyo String Quartet and the National Players. The auditorium has excellent acoustics and a large proscenium stage with modern lighting and sound equipment. It is also used for theatrical production by students and faculty members.

Instructional Buildings

The *Brumbaugh Science Center* (1965) is an impressive complex with three separate wings housing the departments of chemistry, biology, physics, geology and mathematics. One of the wings also contains the *Computer Center,* while the two-story, circular hub houses the 400-seat *Alumni Auditorium,* two smaller lecture halls and the *Myers Science Library.*

Carnegie Hall, constructed shortly after the turn of the century and used for many years as a library, has been converted to an arts building. The skylighted *Shoemaker Galleries* are used for exhibits, receptions and lectures. There is also a large studio on the main floor, and the Juniata College Historical Museum is located in the second floor rotunda. The art department also boasts a two-building ceramics section, "the earthworks," which includes seven wheels, glaze-spraying facilities and various types and sizes of kilns.

Good Hall (1967) contains more than 30 classrooms, five instructional laboratories and additional faculty offices. The language laboratory has modern audio equipment, and a human interaction laboratory is used in the observation of social science experiments.

The Department of Music is headquartered in *Swigart Hall,* an attractive white brick building which was a private residence for many years. Purchased for the College in 1950 with a gift from W. Emmert Swigart of the class of 1906, it has been extensively renovated and contains studios, a classroom, and a large parlor suitable for receptions and recitals.

Juniata maintains an *Environmental Studies Field Station* on Raystown Lake near the village of Marklesburg, 15 miles south of the campus. A complete watershed of approximately 400 acres is under a long-term lease from the U.S. Army Corps of Engineers and is centrally located on the lake with its own harbor and boat mooring facilities. Adjacent to the area is an extensive wildlife mitigation area. Raystown Lake is a new flood control and recreation facility of 8300 acres and 110 miles of shoreline. The Field Station has a 5-bedroom house which has been converted into a field laboratory and station headquarters. A fleet of five boats (32' houseboat, 16' Boston Whaler and three 16' Jon boats), extensive aquatic and terrestrial sampling equipment, and a four-wheel drive carryall are available to students and visiting researchers.

The station is used for courses in terrestrial and aquatic ecology, field geology, geochemistry, anthropology, invertebrate zoology and independent student research projects.

Residence Halls

The College has dormitories which can accommodate about a thousand students. Most of the dormitories were constructed in the 1960s and have recreation rooms, lounges, and utility rooms for washing and ironing.

Tussey-Terrace (1966), *North Hall* (1955) and *Sherwood Hall* (1961) form part of the northern boundary of the campus. *Maude Lesher Hall* (1957) is just across the street from Ellis College Center and *South Hall* (1962) overlooks the football field. The *East Houses* (1970) is a four-unit complex consisting of *Flory House, Kline House, Long House,* and *Miller House.* Each has several apartment-style suites designed for eight students.

The most popular men's dormitory is *The Cloister,* completed in 1928. Located in the center of the campus, it is a fine example of Pennsylvania German architecture, recalling the heritage of the College. It has been completely refurbished during recent years.

UNIT OFFERINGS

Listed and described below are the regular unit offerings at Juniata. They begin with General Education, proceed to Non-Departmental Units, and conclude with departmental listings. The latter are prefaced with brief introductions to each department as a whole.

It should be noted, however, that not all units are offered every term or every year, and that students should consult departmental advisers to see if courses they seek to take are available in a given term.

VALUE CENTERED UNITS

Value Centered Units are indicated by the letters VCU following course titles. Any 200-level General Education unit beyond the two required may be used as a Value Centered Unit.

GENERAL EDUCATION

GE 100 Freshman Seminar

A 20-week program for incoming students who explore together with a faculty member a subject of academic interest announced by the faculty member. The seminars are moderate in size so that the instructor may become one of each student's advisers for the freshman year or for longer if the student so chooses.

GE 101 Modes of Thought and Methods of Inquiry

Examination of the problem solving process in various contexts from the physical and social sciences to the humanities. Four specific goals are: (1) to investigate the process of inquiry across academic lines; (2) to develop an awareness of the role of values in inquiry; (3) to point out difficulties inherent in problem solving; and (4) to discuss the strengths, weaknesses, assumptions and presuppositions of various methods of inquiry.

GE 102 Writing Program

Helping students transmit ideas in writing, the unit seeks as much to help them clarify ideas in their own minds as to help in communication. A workshop involving a small group of students meets weekly, while each student meets with the instructor for one half-hour per week. Evaluation is made on a satisfactory/unsatisfactory basis.

GE 201 The Greek Way: Apollonian and Dionysian
GE 202 The Medieval Mind: Church and God
GE 203 Science, Reason and Power: The Seventeenth Century
GE 204 The Nineteenth Century
GE 205 The American Way

The above units, of which two must be completed among a student's first 18 units, are designed to help students recognize and wrestle with the unchanging questions of every individual's existence as a human being. Such questions have been answered differently through the centuries of western civilization, and by critical examination of the works of a given people at a given time and place, students should recognize different answers. Comparison to particular sets of answers, further, should heighten students' awareness of their own responses.

Note: Any foreign language taken at the third level at Juniata may be substituted for one of the above courses.

GE 401 Human Existence—Analytical
In this unit, students are asked to become more aware of themselves by examining their own values, beliefs and presuppositions and decisions they make based upon them. This awareness is gained by rigorous analysis of decisions made regarding moral and ethical questions relating to the student's current and future life styles. Evaluation is made on a satisfactory/unsatisfactory basis.

NON-DEPARTMENTAL UNITS

While many interdisciplinary units may be found within the College's departmental offerings, some units are taught outside that structure. They may still be used, however, in constructing programs of emphasis.

ND 101 Fundamentals of Library and Informational Science
An overview of the modern library from the standpoints of its objectives, types, organization, literature and recent trends. The unit is designed to provide a more detailed knowledge of reference works, to enable students to evaluate library materials, and to study selected and related materials or special problems related to all disciplines taught at Juniata.

SS 101 Social Science Research Methods
A survey of the strengths and limitations of various types of data collection and interpretation procedures in the social sciences. Data collection is related to theory building and testing.

SS 102 Statistics for Social Science
The unit concentrates in measures of association and procedures for testing hypotheses with ordinal and interval level data, e.g., gamma, rho, Parsons, r.t. tests and ANOVA. Students do problems involving the choice of an appropriate statistic as well as its computation, and are introduced to the use of standard computer programs.
Prerequisite: SS 101

SS 200, 300, 400 Social Science Special Topics (1 unit each)
Investigation of a topic or problem from the viewpoint of two or more disciplines, usually team-taught. Recent topics have included "Population and Behavior in Organizations," "Ethics and Mental Illness," and "Conflict and Conflict Resolution."

SS 301-304 Social Agency Internships (1 unit each)
Student internships in a variety of social service agencies, available to students with appropriate prerequisites and two years of college experience. Placements during regular or summer terms provide opportunities to develop skills in working with people and to integrate academic learning with practical experience.
Prerequisites: Permission of the instructor; others vary

NS 213 Science vs. The Individual (VCU)
An examination of the many paradoxes emanating from our view of science and of ourselves.

The Arts

The non-literary arts at Juniata may be divided into three departments: the fine arts (painting, ceramics and photography); music; and speech, theatre and film. In practice, however, both students and faculty move quite easily among the various disciplines, and units combining different art forms or an art form and another field of study are not unusual.

In keeping with Juniata's liberal arts philosophy, the arts faculty sees its job in broader terms than simply training professionals. Every member of the staff, however, *is* a trained professional, and students seeking to prepare for work beyond the undergraduate level will find no shortage of expert teaching and counseling. In addition, by taking advantage of the many "Special Topics" offerings and by designing units for independent study, students may supplement regular courses and develop programs of greater depth.

The Fine Arts

The Department of Fine Arts provides experience in both studio art and the history of art. Carnegie Hall, a handsome American-eclectic building on the west side of campus, has become a showplace for several art forms and includes, in addition to the large Shoemaker Galleries, excellent facilities for studio work in painting, drawing and printmaking, a darkroom, and several classrooms. Juniata's ceramics section, "the earthworks," consists of two buildings furnished with seven wheels, glaze-spraying facilities and various types and sizes of kilns. The large art history slide collection is especially comprehensive in Renaissance art.

AR 100 Survey of Western Art
A survey of the major stylistic developments from Egypt to the present, with emphasis on Classical, Gothic, Renaissance, Baroque and Modern Epochs.

AR 101 Drawing and Design
Problems in visual composition are combined with exercises in landscape and figure drawing. Such concepts as line, space, color, light and tension are considered.

AR 102 The Nature of Clay
Investigation into the qualities of plastic and fired clay. Beginning with geological origins and composition, students use such knowledge as a basis for projects in three-dimensional design. Primarily a tactile course.

AR 200 Modern Art
A seminar exploring the major stylistic developments since 1800. European and American architecture, painting and sculpture are considered, with emphasis on Impressionism, Cubism, Surrealism and Abstraction.
Prerequisite: AR 100 or permission of the instructor

AR 201 Special Studies in Fine Art
Used from time to time to provide courses related to art history or to studio art but not necessarily appropriate as annual offerings.

AR 203 Renaissance Art
Study of the visual arts of the 14th, 15th and 16th Centuries in Italy and Northern Europe. Emphasis is on the sources which influenced the artistic achievements of Florence and Rome and how these achievements in turn influenced the North.
Prerequisite: AR 100

AR 204 Color Media Workshop
Investigation of the various painting media such as oils, watercolor, acrylics and collage, emphasizing the poetic quality color gives to an image and providing opportunities to develop further the concepts introduced in "Drawing and Design."
Prerequisite: AR 101

AR 205 Graphic Media Workshop
Investigation of the various printmaking media such as woodcuts, serigraphy, engraving and etching, and of how the nature of each contributes to the poetry and form of the image. This unit also provides opportunities to develop further the concepts introduced in "Drawing and Design."
Prerequisite: AR 101

AR 206 Photography: Light as Image Maker (VCU)
The unit emphasizes understanding the expressive possibilities of photography, introducing students to ways of controlling basic photographic equipment and involving students in projects stressing "how a photograph means." The unit deals mainly with black and white photography, and students of both beginning and advanced skill levels are accommodated. Students are expected to provide their own cameras, film, paper and chemicals, while darkroom equipment is provided by the College.

AR 450 Special Topics
Special studies meeting the interests and demands of students, e.g., "Art History," "Italian Renaissance Art," "Gods, Greeks and Art."

Faculty: Assistant Professors McBride and Troy

Music

Units offered by the Music Department enable students to examine both the historical development and aesthetic principles of the medium, as well as to cultivate performance strength. In addition, the department maintains ambitious extracurricular programs in both vocal and instrumental music. Oller Hall presents a well-equipped proscenium stage, though performances are mounted on smaller scales in a number of other, less obvious settings. The music faculty maintains offices in Swigart Hall, which also contains classrooms, practice rooms, a lounge and a music library.

MU 101 Music Fundamentals
Study of the basic tools of music, designed to teach students to read, sing, write, take from dictation, and generally understand the fundamentals of music, such as scales, intervals, chords, melodies and rhythmic patterns commonly used.

MU 110 Introduction to Musical Experience
With emphasis on listening to both live and recorded music, students develop listening skills which enable them to consider historical, intellectual, sensual and emotional values in music. Designed for students of all levels, the unit helps develop educated members of the concert-going public.

MU 201, 202, 203 Harmony and Counterpoint I, II, III (1 unit each)
The technique of writing in the style of the 18th Century, as it is shown in the form of the German vocal chorale, and in two-, three- and four-part instrumental counterpoint. Original works by students are performed.
Prerequisite: MU 101 or permission of the instructor

MU 301 Symphonic Literature
An historical survey of symphonic forms and procedures from 1750 to the present, with emphasis on the symphonies of Haydn, Mozart, Beethoven, Brahms, and post-Romantic composers.

MU 302 Choral Literature
An historical survey of the development and diffusion of choral styles from the earliest part-song forms to the grand oratorio styles of the 18th and 19th Centuries.

MU 303 Opera Literature
An historical survey of opera literature from 1600 to the present, studying representative works of major composers.

MU 304 Piano Literature
The literature of the piano is traced from the harpsichord polyphony of the 18th Century, through the rise and development of the piano sonata and concerto, to the short, descriptive pieces of the 19th Century and 20th-Century innovations.

MU 310 Sixteenth-Century Vocal Polyphony
Investigation of the development of sacred vocal polyphony from the period of the organum to the end of the 16th Century. Original works include settings of the Latin mass in 16th-Century style.
Prerequisite: MU 203 or permission of the instructor

MU 311 Twentieth-Century Styles
Includes study of 20th-Century composition techniques, e.g., analysis of works by Bartok, Schoenberg, Stravinsky and others. Original compositions in several styles are performed.
Prerequisite: MU 203 or permission of the instructor

MU 314 Church Music
Study through lectures, discussions and individual projects of the hymnody, liturgies, repertory, organization and administration of church music.

MU 320 Conducting
The technique of conducting applied to both choral and instrumental music. Study includes principles of attack and release, setting and changing tempi, phrasing and interpretation, score-reading, and rehearsal techniques.

MU 402 Orchestration
Study of notation, ranges, characteristics and uses singly or in combination of individual instruments. Includes research into the history of orchestration.

MU 420 Special Topics
Seminars on selected, specialized topics not covered in the regular departmental offerings, e.g., "Music in the United States." Subject matter varies with student interest and need.

MU 450 Special Projects in Music
Designed to allow concentrated study in any field in the musical arts, the unit should lead to a recital, lecture-recital, comprehensive thesis or original composition.

Applied Music
A 30-week (three-term) course in an applied field, with instruction available to students of varying degrees of competency from beginning to advanced. One unit of credit is earned on the basis of one half-hour lesson and six hours of practice per week, and competency is evaluated through the student's progress, interest, attendance and public performance. Voice, piano, organ, harpsichord, guitar and orchestral instruments.

Performing Ensembles
Concert Choir
College Band
Choral Union
Jazz Band
Woodwind, Brass and String Ensembles
Opera and Musical Theatre
Student Recitals

Faculty: Associate Professors Linton and Hirsch, Mr. Tower

Speech, Theatre and Film

Like the Music Department, the Department of Speech, Theatre and Film seeks to foster study of both the historical development and aesthetic principles of the media with which it is concerned, as well as to cultivate performance capabilities. Beyond the normal course listings, students are encouraged to develop independent or group creative projects and to take advantage of extra- and co-curricular opportunities in the field. Again for live performance, Oller Hall provides a well-equipped proscenium stage, while smaller-scale productions are mounted in a number of other, often unique, settings. In addition, the College maintains a collection of both super-8 and 16mm motion pictures.

Note: In all cinema units, students are assessed a $10 fee to defer equipment and film rental costs.

In film *production* units, the college furnishes cameras and other equipment, while students pay for their own film and developing.

Speech and Theatre

ST 110 Speech Communication
Introduction to improving communication practices by effectively using oral skills while learning to deal with communication analytically, critically and creatively.

ST 201, 202 History of the Theatre I, II (1 unit each)
Close study of individual plays and the styles and conditions in which they were first produced. ST 201 concentrates on Greek, Roman and Renaissance drama; ST 202 on such modern playwrights as Ibsen, Chekhov, Shaw, Brecht, Pirandello, Beckett, Albee and Stoppard.

ST 209 Play Production
Practical work with the one-act play. Students are assigned duties in acting, set construction, lighting, properties, costumes, publicity or make-up.

ST 288 Collegiate Debate I
Introduction to debate techniques and practices, involving participation in on- and off-campus novice debate programs.

EN 310 Oral Interpretation of Literature
(See English Department listings)

ST 388 Special Topics in Speech: Collegiate Debate II
Continuation of ST 288, but with emphasis on the national debate topic. Includes active participation in off-campus debate tournaments.

Special Topics (numbers vary)
Example: "Directing."

Film

CI 110 Film Production
Introduction to the theory of and practice in super-8mm movie making. Exercises cover narrative, documentary and animated filmmaking and each student must complete a major independent film project.

CI 230 Movies as Art
An attempt to give students enough of a background in film aesthetics to allow confident critical judgments about motion pictures. Material includes critical theory on film and on relevant aspects of such sister arts as painting, drama and narrative literature, plus frequent screenings.

CI 305 Films of Chaplin
Examination of the impact of Charles Chaplin's art during his professional lifetime. Gilbert Seldes has stated "he was destined by his genius to be the one universal man of modern times."

CI 333 Special Studies in Documentary Film
Study of the aesthetic and ethical problems raised by an art form that promises, at least implicitly, to tell the truth about its subjects.

CI 366 Narrative Filmmaking
Advanced work in storytelling with a camera, including all phases of production from scripting to final cutting.
Prerequisite: CI 110 or permission of the instructor

Special Topics (numbers vary)
Examples: "Movements," "Directors."

Faculty: Associate Professor Briggs, Assistant Professors Davis and Goehring

Biology

The Biology Department at Juniata consists of six faculty members, all of whom hold doctoral degrees and who, together, provide a broad spectrum of scholarly interests. These interests include

cell, general and neurophysiology; electron microscopy, histology, microbiology and molecular biology; genetics and population biology; chordate anatomy and development; botany and zoology; ecology and marine biology; and plant ecology and limnology.

In addition to such a staff, however, modern biology requires extensive facilities and instrumentation for teaching and research. Juniata possesses both, enabling students to pursue interests along almost any lines. The two-story west wing of the Brumbaugh Science Center, in which the department is housed, contains the traditional classrooms, seminar rooms and laboratories, yet also includes a biology museum, animal room, surgery, greenhouse, radiation and isotope room, and walk-in cold room and freezer. Special rooms house controlled-environment chambers, an electron microscope, physiology and microbiology preparative equipment, tissue culture apparatus, and desk/laboratory cubicles for student research.

As of last year, further, the College operates a 385-acre environmental study area and biology field station on the new Raystown Lake. The site has been leased from the federal government and is well-equipped with a laboratory headquarters, boats of all sizes, and collecting and sampling gear, allowing teaching and research in ecology, limnology and related subjects.

Biology is not a self-sufficient science, and its principles cannot be comprehended without a grounding in the physical sciences and mathematics. Its significance to the individual and utility for humankind, furthermore, cannot be grasped without relation to the humanities and social sciences. Within this context of the wider academic environment, therefore, students may elect any of several programs aimed at specific careers in biology or biology-related fields, or may tailor a program to other personal interests and needs.

Science division offerings, for instance, are varied enough to make feasible programs in preprofessional education (pre-medical, pre-dental, pre-veterinary, etc.), environmental biology, preforestry, aquatic or marine biology, molecular or cellular biology, physiology, botany or medical technology. Yet the opportunity also exists to devise programs combining biology with subjects from other disciplines, e.g., programs in biochemistry, biophysics, oceanography, paleontology, environmental studies, environmental law, scientific writing, or scientific illustration.

Juniata maintains affiliations with biology departments and medical technology programs at several hospitals, and with Duke University's 3-2 forestry program. Juniata also recently entered an informal cooperative program with Duke allowing selected Juniata students to take a comprehensive Marine Sciences course at the Duke Marine Station during the spring term of the junior year.

BI 100 Life (VCU)
Designed for the non-biologist, the unit is aimed at "biological awareness" and explores fundamental concepts about the world of life. Topics include the chemistry of life, bioenergetics, genetics, reproduction, evolution, population and world resources.

BI 101 Biology of The Organism
Study of the diversity of forms in the living world. Major groups are reviewed with emphasis on gross structural organization, basic functions such as digestion, excretion, inheritance and reproduction, and taxonomic classification. Laboratory and lecture.

BI 102 Biology of Populations
A treatment of the population foundations of ecology and evolution. Populations are considered from the genetic point of view as gene pools and as ecological and demographic units. Topics include the nature of population regulation, population interactions, the ecological niche, and the evolution of populations and species.
Prerequisite: BI 101

BI 103 Introduction to Botany
Introduction to fields of modern botany and the great diversity of plant life found on the earth. Topics include taxonomy of plants, stems, roots, leaves, photosynthesis, transpiration and translocation, flowers, fruit and seed. Lecture and laboratory, including field experience.

BI 201 Cell and Molecular Biology
Examination of the basic structure and function of life at the molecular and cellular levels of organization. Animal, plant and microbial cells are compared to demonstrate common characteristics or contrasted to illustrate diverse features. Topics include: chemical composition of cells, structure of macromolecules, and protein synthesis.
Prerequisite: CH 201

BI 202 Microbiology
Study of the structure, function, growth, genetics and ecology of microorganisms. Principal groups studied are bacteria, viruses and fungi. Basic concepts are emphasized and areas important to the quality of human life are examined.
Prerequisite: CH 102 or 205

BI 203 Plant Morphology
An extensive survey of the structure, life cycles, and evolution of the major plant groups. Morphological concepts introduced in lectures are illustrated in the laboratory.
Prerequisite: BI 101

BI 204 Comparative Chordate Anatomy
Examination of the origin, evolution, diversity and structural organization of the chordate animal, with special emphasis on the structure of organ systems in representative chordate groups. Lecture and laboratory, with latter including extensive dissection of selected vertebrate specimens.
Prerequisite: BI 101

BI 301 General Ecology
Advanced study of the interactions of living organisms with their physical and biotic environment. Basic concepts such as nutrient cycling, energetics and population and community dynamics are explored and world problems of radiation, population and pollution are considered from an ecological viewpoint.
Prerequisites: BI 101 and CH 110

BI 302 Genetics
Study of the structure and organization of DNA and the replication and transmission of genes. Topics include procaryote genetics, gene fine-structure and mapping, gene regulation and developmental genetics, transmission of genes, and human and medical genetics.
Prerequisite: BI 201

BI 303 General Physiology
Study of functional phenomena displayed by living organisms at the cellular and organ levels. Topics include immunology, nerve and muscle function, circulation, respiration, digestion, reproduction, and neural and hormonal control mechanisms. Emphasis is placed on human and other mammalian examples.
Prerequisites: BI 101, 201 and CH 110

BI 304 Vertebrate Zoology
A thorough survey of the vertebrate animals of the eastern United States. Collection, taxonomic identification, and natural history are emphasized.

Primarily a laboratory unit with extensive field trips, museum experience, and exercises in identification.
Prerequisite: Junior or senior standing and permission of the instructor

BI 305 Invertebrate Zoology
Examination of the organizational plan, diversity, behavioral and ecological adaptations, and economic importance of representative members of the major invertebrate phyla, emphasizing marine forms.
Prerequisite: BI 101

BI 306 Plant Physiology
Analysis of the fundamental activities of plants. Photosynthesis, mineral nutrition, translocation regulation and other topics are included with advanced treatment of plant growth and development.
Prerequisites: BI 201 and 103, or permission of the instructor

BI 307 Environmental Physiology
A survey of the modifications in physiological functions evolving in the animal phyla to meet the demands of various habitats. The physical and chemical bases for a variety of modifications are examined in detail in relation to function of the whole organism. Topics include water and electrolyte balance, oxygen utilization, temperature control, digestion, and neural and hormonal control mechanisms.
Prerequisites: BI 101 and CH 110

BI 308 Histology of Vertebrates
Study of the structural organization of vertebrate animals at the microscopic level. Fundamental tissues, organs and organ systems are examined with the aid of light and electron microscopes. Lecture and laboratory.
Prerequisites: BI 201 and 204, or permission of the instructor

BI 309 Developmental Biology
Detailed review of the sequence and control of the orderly process by which living organisms come into being. Examines the genetic, biochemical regulation of morphogenesis, the structural and functional differentiation of specific cells, and organs and organ arrays. Lecture and laboratory.
Prerequisite: BI 201

BI 210, 310, 410 Special Topics
Units offered at the discretion of the department to qualified students. Topics may vary from term to term and more than one may be offered per term. Recent topics have included "Histotechniques," "Embryology," "Electron Microscopy," "Plant Anatomy," "Parasitology," "Biometry" and "Plant Ecology."
Prerequisite: permission of the instructor

Faculty: Professors Rockwell and Zimmerer; Associate Professors R. Fisher, Gooch and Senft; Assistant Professor Gustafson

Chemistry

The Chemistry Department offers thorough training in modern theoretical and experimental chemistry. The department has enjoyed for many years a reputation of excellence in the undergraduate training of professional chemists, and has been listed since 1936 among the college chemistry departments whose programs and facilities meet the demanding criteria established by the American Chemical Society. Continued service in this tradition is one of the goals of the six members of the faculty, particularly in this time of great demand for chemists who can help solve critical en-

ergy and environmental problems. In addition, the department is keenly aware of its obligation to interpret the aims and methods of chemistry to those with no career interest in science, and to provide collateral support to students with programs centered in biology, geology, forestry, engineering, and preliminary training for the health professions.

At all stages of advancement, students engaged in laboratory work acquire first-hand experience with a wealth of modern instrumental techniques, including ultraviolet, visible and infrared spectrophotometry, nuclear magnetic and electron spin resonance, gas and high-pressure liquid chromatography, differential calorimetry, conductimetry, x-ray diffraction, ultracentrifugation and mass spectrometry. In addition, a portable laboratory computer is available for interfacing with most of the instruments, and computer applications are repeatedly stressed. The department has excellent laboratory support facilities, including high-vacuum equipment for inert-atmosphere experiments, a lab especially designed for high-pressure work, a cold room for work with sensitive biochemicals, and extensive glassblowing facilities.

The chemistry curriculum is unusual in that a separate sequence of laboratory courses is offered in parallel to the lecture courses. A student may thus receive credit for whatever laboratory experience seems appropriate, independent of simultaneous enrollment in lecture courses. Research opportunities are available in organic, inorganic, physical and biochemistry, as well as certain applied areas, including fuel resources.

CH 101, 102 Principles of Chemistry I, II (1 unit each)
Rigorous introduction to chemistry. Topics include stoichiometry, atomic and molecular structure, bonding, properties of elements and compounds, thermodynamics, equilibrium and kinetics.
Prerequisite: Algebra competency

CH 110 Basic Chemical Laboratory Techniques
Introduction to the practice of chemistry, including discussion and application of a variety of separation and analytical techniques. Eight hours of classroom and laboratory work per week.
Prerequisite or co-requisite: CH 102 or 205

CH 201, 202 Organic Chemistry I, II (1 unit each)
Introduction to the chemistry of organic compounds, with emphasis on their dynamic behavior both as representative, covalently bonded molecular species and as key components of living systems. Brief laboratories are scheduled.
Prerequisite: CH 102 or 205

CH 205 Physical Chemistry of Solutions
Theoretical and experimental considerations of thermodynamics and reaction kinetics. Topics include homogeneous chemical equilibrium, transport phenomena, theory of electrolytes, molecular energy states and spectroscopy.
Prerequisite: CH 101. *Co-requisite:* MA 105

CH 210 Synthesis of Chemical Compounds
Intensive laboratory experience in organic and inorganic synthetic techniques. Mostly independent projects based on library research.
Prerequisites: CH 110 and 202

CH 301 Biochemistry I
Study of properties of biomolecules and their interactions. Topics include biological energy procurement and information transfer.
Prerequisites: CH 202 and BI 201, or permission of the instructor

CH 302 Biochemistry II
Study of biosynthesis and selected topics, including control of gene expression, the immune system, and hormones.
Prerequisite: CH 301

CH 303 Inorganic Chemistry
Study of the properties and reactions of inorganic compounds as they relate to structure, bonding and other theoretical models.
Prerequisite: CH 205 or 305

CH 305 Physical Chemistry: States of Matter and Rates of Reaction
Study of the structure and properties of the states of matter, with emphasis on the solid and liquid states and including phase equilibrium. The second part is a rigorous study of chemical kinetics.
Prerequisites: CH 102 or 205, MA 201, and PC 209 or 211

CH 306 Statistical Thermodynamics
Study of the fundamental principles of statistical mechanics, using partition functions to derive experimental properties of ideal and non-ideal gases, electrolytic and non-electrolytic solutions, and crystalline solids.
Prerequisites: MA 202 and CH 305, or PC 213 or 312

CH 310 Chemical Analysis
A survey of modern analytical techniques, emphasizing the use of instrumental methods. Two or three hours of lecture and at least eight hours of laboratory work per week.
Prerequisite: CH 110, and CH 202 or GL 210

CH 311 Chemical Instrumentation, Design and Control
A laboratory unit focusing on the electronics of laboratory instruments. Subjects of experimentation are analog and digital electronics, practical trouble shooting, and laboratory computers and their interfacing with instruments.
Prerequisites: MA 105 and PC 209 or 212

CH 312 Physical Measurements on Chemical Systems
Study of the problems associated with such measurements, focusing on experimental design, statistical analysis of data, and molecular interpretation of both the student's work and work reported in the literature.
Prerequisites: CH 110, and CH 205 or 305

CH 401 Advanced Organic Chemistry
Investigation of organic reaction mechanisms, with emphasis on modern techniques employed in the elucidation of mechanisms. Topics include carbonium ion, carbanion, carbene, and free radical intermediates and the Woodward-Hoffman rules of concerted reactions.
Prerequisites: CH 202 and 305

CH 402 Quantum Mechanics
The fundamental principles of quantum mechanics are presented and applied to problems in chemical bonding and spectroscopy by approximation and group theory methods.
Prerequisites: MA 202 and CH 305, or PC 213 or 312.
Co-requisite: MA 203

CH 410 Introduction to Research
A seminar in planning and executing research projects, including independent preparation of a research proposal.
Prerequisite: Permission of the instructor

Faculty: Professors Russey, Schettler and Wampler; Associate Professor Mitchell; Assistant Professors T. Fisher and Reed

Economics and Business Administration

Students interested in economics and business administration soon discover that a wide variety of topics ranging from quantitative analysis to the complexities of personal interaction are relevant to managing a business firm. Recognizing this

interdisciplinary nature, the Department of Economics and Business Administration creates and develops, as its primary function, necessary decision-making abilities, also providing opportunities to study relevant content material and develop particular skills.

The department curriculum is designed to deal with four basic business functions: production, finance, marketing and personnel; general management skills; accounting; and the relationship of the firm to its environment (i.e., economic, legal, political, etc.). Theory and conceptual material are extensively supplemented with direct and indirect contact with the business community. The use of case studies, numerous field trips, guest speakers and business internships also enhance the relevance of education in economics and business administration.

Students choosing programs in this field or pursuing programs related to it may prepare themselves for many diverse career opportunities or for work at the graduate level. In addition to the coursework listed below, more advanced study in each area is offered through numerous "special topics" offerings, depending upon student interest. Tutorials and independent studies are also available.

Business and Management

EB 100 Introduction to Business
Introduction to business administration, providing an overview of four basic business functions—production, personnel, marketing and finance—and using field trips as a primary learning device.

EB 101 Personal Finance
Introductory examination of monetary aspects of the typical household. Topics include saving and investing, purchasing a home, establishing a monthly budget and creating an estate.

EB 220 Production Management
Study of production problems such as aggregate planning, scheduling, dispatching and facilities. A framework for examination is built around process analysis and tradeoff analysis.

EB 320 Production Planning and Control
Comprehensive, integrated treatment of functions, techniques, objectives and policies relating to production planning, scheduling and inventory control.

EB 321 Field Study: Production
An opportunity to observe and be involved in field applications of the basic techniques of production management.

EB 230 Marketing Management
Analysis of the roles of pricing, promotion, distribution and product policies within the firm. Case method is employed to emphasize the complexity of marketing decision making.

EB 332 Marketing Research
Examination of tools and techniques for gathering and interpreting data used in making marketing decisions. Special attention is paid to evaluation of the special strengths and weaknesses of the techniques.

EB 333 Field Study: Marketing
Case studies of marketing situations in a specialized area (e.g., retailing, advertising) are combined with limited field experience with local businesses, emphasizing decision making in a particular subset of the total marketing program.

EB 240 Personnel Management
Examination of current theory, techniques and practices encountered in the personnel management function.

EB 340 Labor Relations
Analysis of the labor-management relationship, including an historical and theoretical perspective as well as study of the current dynamics.

EB 341 Field Study: Personnel
Case studies are supplemented with field work experience, emphasizing specific topics to which the personnel manager must address himself.

EB 250 Financial Management
Developing insight into the problems of managing business funds, the unit attends to the flow of funds, sources and forms of external financing, and fund allocation among competing alternatives.

EB 350 Portfolio Analysis
Coverage of the basic concepts of investment management, analysis and timing. Topics are corporate securities, the security markets, investment analysis and investment administration.

EB 351 Field Study: Finance Analysis
Case studies are supplemented with field work experience, emphasizing specific topics of interest in financial management.

EB 270 Organization for Administration
Analysis of organizations and their design, using organizational structure, measurement systems, reward systems, and hiring and development systems as the primary analytical tools.

EB 271 Behavioral Analysis of the Organization
Analysis of human behavior in an organizational setting, including study of individual, interpersonal and group behavior.

EB 370 Systems Analysis
Study of the selection of elements, relationships and procedures to achieve a specific purpose.

EB 470 Cases in Business Policy
Case studies highlight the problems a firm encounters in establishing its basic goals; in selecting strategies for the functional areas such as marketing, production and finance; and in the implementation of these strategies.

EB 280 Business Law
Study of the essential elements of an enforceable agreement and the legal aspects of required performance, with attention given to the development of common law and the Uniform Commercial Code.

Accounting

EB 260 Accounting for Management Control I
The unit explores the fundamental principles and assumptions of accounting and develops understanding of the inter-relationships of the financial statements and transaction analysis.

EB 261 Accounting for Management Control II
Analysis and interpretation of accounting data used in planning and controlling business activity.

EB 360, 361 Intermediate Accounting I, II (1 unit each)
Comprehensive study of contemporary accounting theory, concepts and procedures and their application to financial reporting.

EB 363 Tax Accounting
Comprehensive study of the federal income tax structure as related to partnerships, corporations, estates and trusts.

EB 460 Cost Accounting
Comprehensive study of the uses and limitations of formal cost accounting systems as they exist and of how cost systems should be designed.

EB 461 Auditing Procedures
Examination of current auditing principles and objectives of independent accounting firms, with particular emphasis on auditing procedure and the ethical and legal responsibilities of auditing.

Economics

EB 102-109 Economic Problems (1 unit each)
Introduction to methods of economic analysis through study of contemporary problems such as inflation, environmental pollution and the energy shortage.

EB 110 Capitalism
Critical examination of the market as a social mechanism for solving economic problems, with attention given to the place of the market in the total social and cultural setting of society.

EB 210 Income and Employment
Intermediate level study of macroeconomic principles and their application to the problem of stabilizing the economy.

EB 211 Economic Analysis of Organizations
Study of a set of reasoning tools and methods based on macroeconomics which can help solve and provide insight into problems faced by organizations operating in a market system.

Intern Programs

EB 490 Business Intern Program (3 units)
A full-time placement with a business concern, providing first-hand experience with managerial decision making, especially in the functional areas of production, personnel, finance and marketing.

EB 491 Administrative Intern Program (3 units)
A full-time placement with an organization, providing exposure to and encouraging the analysis of the organization as a system.

EB 492 Accounting Intern Program (3 units)
A full-time placement with an organization, made in either public accounting, finance or corporate accounting departments and providing in-depth exposure to the intricacies and practice of accounting.

Special Topics—variable numbers

Examples have included "Economic Dynamics," "Marx and Mill," and "Studies in Economic Development."

Faculty: Professors Cherry and Nolan; Associate Professor Lakso; Assistant Professors Bargerstock and Wise; Mr. Alexander and Mr. Nollau

Education

The primary goal of the Department of Education is to serve as a continuous contributor to the liberal arts education of Juniata students. The department sees as its primary function the development and promotion of the study of education as an academic discipline. This study involves several broad conceptual areas, including the history and philosophy of education, the purposes and structures of American educational institutions, curriculum and instruction, and human social and psychological development. In addition, there are several programs devoted to the study of teaching as a distinctly human endeavor designed to enhance the most complete individual and social development of each individual.

While education in its broadest sense is always uppermost in the philosophy of the department, students may nevertheless specialize in several programs leading to certification to teach in elementary or secondary schools. Students are provided, through the various curricular offerings, many opportunities for field experience in education, including outdoor recreation, a day care center, nursery school, human interaction labora-

tory, practicums in elementary and secondary schools and full-time student teaching.

Graduates of the college with programs in or related to the Department of Education are involved in such diverse careers as public school teaching, industrial education, administration, sales, public relations, police work, special education, government service and educational consulting.

ED 100 Values Education: Learning to Value (VCU)
The unit presents both a method of value conflict resolution for anyone's use in everyday affairs and a method for the study of values for those who teach in elementary or secondary schools.

ED 200 Basic Foundations of Education
Study of the basic political, economic, sociological and psychological problems facing our public school system. The student is encouraged to review possible solutions and to begin development of his or her own solution.
Prerequisite: Not recommended before third term of freshman year

ED 212 Physical Activities for Handicapped Children
An interdisciplinary unit preparing students to modify, adapt and test basic physical educational processes, theories and curriculum components for the mentally and physically handicapped.
Prerequisite: PY 101

ED 220 Humanistic Psychology
Introduction to a new major force in the study of human behavior, including the history of humanistic psychology, comparison with behavioralism, and an opportunity to view in some depth one or more of the major theories in the field.
Prerequisite: PY 101

ED 232 Mathematics in the Elementary School
Exploration of current mathematics curricula, content and methodology at the elementary school level and evaluation of instruction afforded in various approaches.

ED 235, 236 Human Development I, II (1 unit each)
Investigation of the biological, psychological and sociological principles in human development, with emphasis on prenatal, pre-school and early childhood years (ED 235) and on middle childhood and early and later adolescence (ED 236).
Prerequisite (ED 235): PY 101
Prerequisite (ED 236): ED 235

ED 325 Language Arts I
Study of the teaching of listening, speaking and writing skills. Topics include planning, management, use of questions and selection of appropriate objectives, modes of teaching, learning environments and activities. Group and individual projects, demonstration, peer-teaching, readings and competency checks are utilized.

ED 326 Language Arts II—Developmental Teaching of Reading
Study of the fundamental principles and eclectic methods employed in the teaching of reading. Students master competencies on all levels of the performance modules through knowledge level exams, simulation projects and a teaching level practicum. Readings and a cumulative group project are required.

ED 327 Curriculum in Science and Health
Study of science and health content appropriate to the various levels of the elementary school. After studying principles, students design a science curriculum model.

ED 330 Introduction to the Exceptional Child
An overview of exceptionality in childhood and early adolescence, including an introduction to the nature and etiologies of individuals with special social, emotional, intellectual and physiological backgrounds and needs.

ED 331 Children's Literature
Study of the role of children's literature in the total elementary school curriculum, development and use of the skills necessary for critically analyzing children's tradebooks, and familiarization with the types of literature written for children. Topics include noted authors and illustrators, sexism and racism, and pertinent research in the field.

ED 340 Adolescence
Psycho-social study of the period of adolescence: self-concept and self-esteem; the dynamics of social interaction and development; sexual roles, values and behavior; parent-adolescent relationships; intellectual and cognitive growth change; vocational choice and aspiration.
Prerequisite: PY 101 or ED 235 or 236

ED 350 Elementary Junior Year Practicum
Regularly scheduled observation, tutoring and teaching experiences in various school organizational patterns and at different grade levels in preparation for student teaching. Includes discussion and meetings on topics of student concern. (May be eliminated if methods courses provide this practical experience in several schools.)
Prerequisite: Approved Elementary POE for Certification to Teach

ED 360 Secondary Practicum
The first major opportunity to become involved in what it means to teach in the public schools, particularly in the student's field of interest. Emphasis is on psychology of teaching, teacher routine, tutorial and small group experiences, and the chance to work at several age/grade levels. Three terms long, the unit culminates in a professional seminar during the senior year.
Prerequisites: PY 101 and approved Secondary POE for Certification to Teach

ED 361 Studies in Teaching and Educational Psychology
Preceding student teaching, the unit provides both theoretical and practical models to follow in the classroom. The models deal with both subject matter and general classroom management.
Prerequisite: Two terms of ED 360

ED 402 Creative Activities
Study of creativity, its development and its implementation in the elementary classroom and the effect of the teacher's attitude toward this phase of education. Topics include basic concepts in art, music, creative movement and dramatics and strategies for guiding children in their development in each area.

ED 420 Corrective Reading
Study of the principles, materials, methods and procedures involved in the classroom diagnosis and remediation of reading difficulties. Other topics are construction, selection and use of informal and standardized texts, work with non-educational difficulties, and culturally different and slow learners. A practicum, readings and a number of individual and group projects are required.

ED 450 Elementary Student Teaching (3 units)
The culminating preparatory step for elementary teaching. Students draw from their knowledge of content areas and teaching strategies to develop learning experiences, cognizant of pupils' cognitive, affective and psychomotor development. They plan activities, taking into account individual differences in learning styles and abilities, and guide pupils to maximize their potentials.
Prerequisites: Approved Elementary POE for Certification to Teach and recommendation of the department

ED 452 Secondary Student Teaching (3 units)
A full-time field experience in which students can apply much of the theory learned in the first parts of their programs. Additional studies in educational psychology are handled in conjunction with actual classroom teaching.
Prerequisites: ED 361 and recommendation of the department

Special Topics (numbers vary)
Examples have been "Comparative Education," "Reading Programs in Elementary Schools," and "Problems in Language Arts Curriculum."

Faculty: Professor Crouch; Assistant Professors Ondrejcak and Woodrow; Ms. Miller, Ms. Seider and Ms. Dortsch

English

The English Department is concerned with the study of literature, language and culture, and with the intellectual, emotional and aesthetic forces which have formed them and continue to influence mankind. It is the primary purpose of the department to introduce the student to the variety of literature and to assist him in developing an understanding and appreciation of that literature. This process involves the study of language, the study of the forms and techniques of literature, and examination of the relationship of literature to the intellectual and cultural world of which it is a part. In the general context of the liberal arts education, it is a central function of the department to involve the student with literature as an expression of man's most profound concerns about himself and his world, and, no lessly importantly, with the beauty and joys of the written and spoken word.

Linguistics

LL 100 Introduction to Linguistics
Study of language as a system and as behavior; analysis of language in terms of both innate and learned cultural behavior and as a source of power for poet, businessperson and politician.

EN 200 History of the Language
Study of the origin, growth and structure of the English language through its historical evolution from Indo-European to Modern British and American English.

EN 300 Modern English Grammar
Study of the linguistic features of the English language from traditional, structural and transformational-generative approaches.

Writing

EN 220 Poetry Writing
An intensive workshop in poetic techniques and extensive writing of poetry for class discussion and criticism.

EN 221 Fiction Writing
Study of the techniques of fiction, extensive writing of fiction, and development of creative and critical approaches through exercises and class discussions.

EN 222 Essay Writing
Study and writing of the informal essay with particular attention to exposition. The emphasis is on developing the writing style of the student.

EN 223 Professional Writing
Using the workshop approach, the unit offers extensive writing opportunities geared to the individual's career goals, as in journalism, science-technical writing, business writing, law writing, etc.

EN 301 Apprenticeship in Communications
An internship program allowing students to work under professional supervision in an aspect of communication such as journalism, radio-TV, or drama.

EN 302 Apprenticeship in Public Relations
An internship program allowing students to work under professional supervision in any one of three areas of public relations: public information, college development, or constituency relations.

Literature and Culture

EN 100 The Sense of Life in Literature (VCU, multiple sections)
Study of literature as the expression of enduring human problems and concerns, introducing the student to the techniques of literary analysis. (Examples of topics: "Sky Gods — Earth Goddesses," "Black American Literature," "The Detective Story," "The Satirical View.")

EN 240 The Spirit of England: From Barbarians to Baronets (VCU)
Study, through literature, of England in its foundations, unification, late-medieval times of stress, Renaissance spiritual expansion, and post-Renaissance worldly expansion. Such writers as Chaucer, Shakespeare, Milton and Swift are used.

EN 241 The Spirit of England: A Changing Consciousness (VCU)
Study of English literature of the period during which England was transformed from a European power to a world empire and diminished to her present condition. These transformations and resultant changes in intellectual, moral and aesthetic values are examined in the works of such writers as Wordsworth, Dickens, Browning, Conrad, Yeats, Joyce and Auden.

EN 242 The Spirit of America: Forging an Identity (VCU)
Study, through literature, of the formative stages of the American Republic with emphasis on intellectual, moral and aesthetic values as seen in the works of such writers as Hawthorne, Poe, Melville, Emerson, Thoreau, Whitman and Twain.

EN 243 The Spirit of America: Coming of Age (VCU)
Concentrating on the 20th Century, study of the growth of America to world power as seen in the work of such writers as Eliot, Fitzgerald, Hemingway, Faulkner, Mailer and Bellow. Emphasis is on the intellectual, moral and aesthetic values of the age.

EN 250 The Study of American Folklore
Theoretical and field experience in the materials and methods of the study of American folklore. Each student builds his or her own project.

Literature

EN 210 Literary Analysis
Intensive study of a few pieces of literature. The critical and analytical skills developed will serve as a foundation for subsequent study of literature.

EN 310 Oral Interpretation of Literature
Literature through the medium of oral performance, involving the analysis and performance of selections from prose, poetry and drama.

EN 330 Modes of Literature: Comic
The comic vision as seen in the literature of such writers as Chaucer, Shakespeare, Fielding, Shaw, Sterne and Joyce.

EN 331 Modes of Literature: Tragic
The tragic view of life as seen in the literature of such writers as Shakespeare, Hardy, O'Neill, Hemingway, Blake and Pinter.

EN 332 Modes of Literature: Lyric
The lyric voice in poetry, fiction and drama as seen

in the literature of such writers as Donne, Keats, Whitman, Yeats, Shakespeare, cummings, Melville and Wolfe.

EN 333 Modes of Literature: Satiric
The satiric view of such writers as Chaucer, Swift, Congreve, Twain, Fielding and Nathaniel West.

EN 334 Modes of Literature: Heroic
The heroic vision as seen in Homer, *Beowulf*, Milton and Melville and as depicted by such contemporary writers as Joyce and Faulkner.

EN 340 Genres of Literature: British Drama
Study of the development of British drama from mystery and miracle plays, through the age of Shakespeare, the Restoration and 18th Century, to Shaw, Pinter and Osborne.

EN 341 Genres of Literature: Shakespearean Drama
Study of Shakespearean drama as genre: the comedy, history and tragedy prototypes as developed in the plays.

EN 342 Genres of Literature: Modern Drama
Study of the various generic forms in drama from Ibsen and Chekhov to Beckett and Albee.

EN 343 Genres of Literature: American Novel
Study of the American novel as genre by reading such novelists as Hawthorne, Melville, Twain, Hemingway, James, Fitzgerald, Faulkner and Pynchon.

EN 344 Genres of Literature: British Novel
Study of the forms developed in the English novel from Fielding and Sterne through Joyce, Woolf and Durrell.

EN 345 Genres of Literature: The Short Story
Study of the modern short story from its development in mid-19th Century to its variety today in such writers as Borges, Barthelme and Oates.

EN 400 Major Authors
Intensive study of the works of a single author. Henry James, Melville, Swift and Shakespeare have been studied recently.

EN 450 Theories of Literature
Examination of the great theories of the nature and function of literature from Aristotle to present. The student is expected to develop his or her own coherent theory of literature as part of the study.

EN 480 Special Topics
Special studies to meet the interests and demands of students. Recent topics have been "The Victorian Temper," "The 20th-Century Experimental Novel," and "Modern Verse Drama."

Faculty: Professor Hunter; Associate Professor Church; Assistant Professors Croce, Hochberg and Hofelt

Foreign Languages

Juniata offers study programs in language, literature and civilization at the elementary, intermediate and advanced levels. These programs open many doors to graduate study or to positions in industry and commerce, the federal government, library work, teaching and the natural sciences.

Those who study modern foreign languages or Classics may study abroad for a summer, semester and/or year in France, Germany or Spain through the Brethren Colleges Abroad program or, by special arrangement, in Mexico, Russia, South America, Greece or Italy.

French

FR 110, 120, 130 French I, II, III (1 unit each)
Principles of grammar, pronunciation, reading

and writing. Conversation and composition are based on readings (poetry, narrative and cultural), slides, and students' daily experiences. In FR 130, questions of linguistic and cultural relativity are raised explicitly. *Note:* Initial placement in FR 120 or 130 available based on placement examination and interview with the instructor.

FR 245 French Conversation and Composition
Intensive grammar review combined with intensive speaking and writing based on selections from French literature, historical events, culture and subjects chosen by the students.
Prerequisite: FR 130 or permission of the instructor

FR 250 Major French Philosophical Writers
Close reading of expository prose, *"contes philosophiques"* and polemical writings from the Renaissance through World War II, emphasizing the development of French scepticism.
Prerequisite: FR 245

FR 255 French Novels
Reading of at least five complete novels from the 17th through 20th Centuries, with emphasis on the evolution of values from aristocratic to artistic and individualistic and on the development of psychological narrative.
Prerequisite: FR 245

FR 310 Themes in French Poetry
Thematic analysis of major poems from the Middle Ages to the 20th Century, including critical evaluation of the uses of such themes as war, captivity, love, death and mind.
Prerequisites: FR 245 and another 200-level unit or permission of the instructor

FR 350 Special Topics
Studies in subjects of interest to students which are not included in the regular offerings. Examples have included "French Civilization," "French Theatre" and "Phonetics."

German

GR 110, 120, 130 German I, II, III (1 unit each)
Elements of the language for speaking, listening, reading and writing. In GR 130, active use of the language in conversation and writing, with discussions focused on social and cultural developments in German-speaking countries since World War II. *Note:* To be taken in sequence, but advanced placement available based on examination and personal interview.

SL 117 Literature and Politics in the Two Germanies (VCU)
The impact on German literature since World War II of the two diverse German political regimes.

GR 145 Advanced German Grammar
How present-day German functions, including study of the interrelation of content and sentence structure.
Prerequisite: GR 120 or advanced placement

GR 240 "Scientific" German—Supervised Translation and Reading
Analysis of complex structures in scholarly German and teamwork in translation of texts in the humanities and natural and social sciences.
Prerequisite: GR 120 or equivalent

GR 250 Goethe and His Contemporaries
Study of the 18th-Century German writers and their rediscovery of nature in reaction to French classicism and rationalism. Selected works from writers such as Goethe, Schiller, Kleist, Lessing, Wieland, Novalis and Hölderlin.
Prerequisite: GR 130 or permission of the instructor

GR 255 German Literature Since World War II
A focus on the intellectual and socio-political currents in the German-speaking countries after World War II as seen in the writings of authors such as Biermann, Böll, Dürrenmatt, Frisch, Grass,

Handke, Seghers and C. Wold.
Prerequisites: GR 130, 145 or permission of the instructor

GR 270 The German Speaking World
A survey of four German-speaking countries (Austria, East Germany, Switzerland, West Germany) and their cultural achievements since World War II.
Prerequisites: GR 130, 145 or permission of the instructor

GR 310 19th Century German Playwrights
Readings from such authors as Büchner, Grillparzer, Hebbel and Kleist with discussion focused on man's role in history as portrayed in their works.
Prerequisite: one 200-level unit or permission of the instructor

GR 315 20th Century German Literature to 1945
Selected readings from the works of such authors as Kafka, Mann, Hofmannsthal, Hesse and Rilke with discussion focused on the complex problem facing the artist in the changing political and social conditions of the first half of the century.
Prerequisite: one 200-level unit or permission of the instructor

GR 350 Special Topics
Units in areas not covered by regular offerings. Examples have been "Germanic and Romance Languages" and "The Teaching of German."
Prerequisite: one 200-level unit or permission of the instructor

Latin

LT 110, 120, 130 Latin I, II, III (1 unit each)
Elementary, intermediate and advanced Latin, introducing Roman civilization in word and image (110); Roman mythology in word and image (120); and Roman culture through confrontation of its literature, sculpture and architecture with our times (130).

LT 210 Special Topics
Readings from the works of Livy, Cicero, Ovid, Virgil and others.

Russian

RU 110, 120, 130 Russian I, II, III (1 unit each)
Study of the essentials of pronunciation and grammar and reading of cultural material. Also, conversation (120) and reading of various texts of progressive difficulty in prose and poetry (130). All three units involve language laboratory work.

SL 110 Freedom and Happiness in Russian Literature of the 19th Century (VCU)
Introduction in English to the outstanding works of Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy and Chekhov.

SL 119 Individual and Authority in Modern Russian Literature (VCU)
Readings and analysis of Gorky, Zamiatin, Sholokhov, Pasternak and Solzhenitsyn.

RU 210 Russian Conversation and Composition
Grammar review with increased emphasis on reading literary and technical texts and conversation exercises.
Prerequisite: RU 130 or permission of the instructor

RU 320 Aspects of American and Russian Culture (VCU)
Comparative study of historical background and major developments in the philosophy, religious life, literature, national character and folklore of both countries.

RU 325 Tolstoy, His Life and Message (Peace and Conflict Studies)
Reading and analysis of Tolstoy's works after 1879.

Spanish

SP 110, 120, 130 Spanish I, II, III (1 unit each)
Fundamentals of grammar, pronunciation and composition with development of skill in oral comprehension, speaking, writing and reading and development of an appreciation of Spanish culture. *Note:* Advanced placement available by examination and personal interview.

SL 112 Myth and Magic Realism (VCU)
Spanish American literature is studied in English in order to gain an appreciation of its unique blend of mystery and realism. Myths and traditions of various countries are examined through careful reading of essays, poetry, short stories and representative novels of leading authors.

SP 235 Spanish Conversation
Stimulation of fluent and spontaneous use of practical spoken Spanish through intensive conversation and discussion of a variety of topical subjects.
Prerequisite: SP 130 or permission of the instructor

SP 240 Spanish Civilization (VCU)
Introduction to the many facets of Spanish civilization: art, music, literature, philosophy and everyday life.
Prerequisite: SP 130 or permission of the instructor

SP 245 Sound and Form in Spanish
Study of Spanish phonetics and phonemics and thorough study of expression in Spanish achieved through study of grammar, extensive translation and writing.
Prerequisite: SP 130 or permission of the instructor

SP 250 Depth and Style in Spanish Readings
Development of skill in reading Spanish, textual analysis and literary appreciation through reading major works from different periods of Spanish and Spanish American literature.
Prerequisite: SP 130 or permission of the instructor

SP 310 Modern Spanish Theatre
Spanish theatre from Neo-Classicism through Romanticism, Realism and the contemporary scene.
Prerequisite: one 200-level unit or permission of the instructor

SP 315 The Spanish Novel
Detailed study of at least six major 20th-Century Spanish novels. Varied selections, including recent works.
Prerequisite: one 200-level unit or permission of the instructor

SP 320 The Spanish American Novel
Reading of major, representative 20th-Century novels from Spanish American countries, providing deeper understanding of the various continental cultures.
Prerequisite: one 200-level unit or permission of the instructor

SP 330 El Quijote
Study of the first novel, *Don Quijote*, including reading of entire work and emphasis on Cervantes' use of language, character development, and the universality of the novel.
Prerequisite: SP 250, 240 and preferably one other literature unit

SP 335 The Spanish Comedia
Study of the eclectic theatrical form, the *comedia*, in the Golden Age of Spanish literature, with readings from Lope de Vega, Tirso de Molina, Calderón de la Barca and others.
Prerequisite: one 200-level unit or permission of the instructor

SP 340 Early Spanish Literature
Study of the origin and development of the various genres in the Middle Ages and Renaissance, including reading of *El poema de mio Cid, El libro de buen amor, La Celestina,* the ballads, early

theatrical works and other works.
Prerequisite: SP 240 or 250

SP 350 Special Topics
Examples have included "Directed Readings" and "Hispanic Studies."

Teaching

LL 202 The Teaching of a Foreign Language
Study, discussion and students' presentation of various methods, approaches and aids used in foreign language teaching.
Prerequisite: two units in a foreign language or equivalent

Languages Faculty: Associate Professors Dolnikowski, Frijters and B. Heller; Assistant Professors E. Church and Jaeger; Mr. Flanary, Ms. Mundis

Geology

An energy shortage, depletion of mineral resources, environmental imbalances, natural hazards to man — all underscore the need for improved understanding of our physical environment and man's relationship to it. Recognizing this need, the Geology Department offers a number of elementary courses which investigate earth resources, the history of our planet, the processes acting upon it, and the role of earth sciences in modern society. The department offers, in addition, more advanced courses preparing students for graduate study or careers in geology and related fields. Fundamental principles, new developments and ideas, and field, laboratory and research methods are integral parts of the curriculum, which is taught by three faculty members, all of whom hold the doctoral degree and who specialize in various aspects of geology.

Classrooms and laboratories are in the Brumbaugh Science Center. Department equipment ranges from simple field collecting gear to atomic absorption and x-ray diffraction units, hydrothermal furnaces, microscopes, and other analytical apparatus. Additional facilities include collections of maps, minerals, rocks and fossils, a lab for preparing field specimens for analysis, and a darkroom. Frequent field trips augment the classroom and laboratory experience.

In order to understand fully the processes and products in the geologic environment, the study of geology is closely related to other scientific fields, including mathematics, biology, chemistry and physics. Given this interrelationship, plus the many applications of geological knowledge in modern society, individualized academic programs may be planned to suit the goals of each student. Among the specialties within the earth sciences, programs may be prepared in geology, environmental sciences, pre-oceanography, geochemistry and geophysics, to name but a few.

General Earth Science and Environmental Science

GL 100 Environmental Geology
Study of geologic processes which affect man's physical environment in such areas as landscape development, distribution of resources, geologic hazards, and man's interaction with his environment. Field trips; four hours of lab per week optional. *Note:* This is the introductory geology unit for students in geology, earth science or environmental science.

GL 110 Geography
A brief survey of the elements of man's physical environment including landforms, waters, climates and vegetation.

GL 111 Oceanography
Survey of the physical, chemical and geological environments of the ocean including sea floor topography, composition and circulation of sea water, and the life existing in the oceanic environments.

GL 112 Weather and Climate
Introductory study of the elements of weather and the physical bases for climate including air pollution and climatic changes.

GL 113 Mineral Economics, Politics and Law (VCU)
Mineral deposits are introduced and related to national and foreign resources; to political, economic and legal policies; and to social problems involved due to unequal distribution and exploitation of mineral wealth.

GL 201 A History of Life (VCU)
Comprehensive examination of evolutionary theory and mechanisms for the origin and development of life, with the fossil record and the geologic past as the major documentary evidence.

Fundamental Professional Units in Geology, Earth Science and Environmental Science

GL 101 Historical Geology
The geologic history of North America, stressing principles and methods of historical interpretation and discussing the development of ocean basins, continents, mountains and life. Field trips; four hours of lab per week.
Prerequisite: GL 100 recommended

GL 200 Introduction to Field Methods in Geology
Field presentation of basic techniques in mapping, collecting and describing rocks in hand specimen and outcrop, measuring stratigraphic sections, and interpretation of relationships among different rock units. *Note:* Summer only, three weeks in duration; eight hours per day, five days per week, may run into weekends; field trips.
Prerequisite: GL 100; GL 101 recommended

Intermediate Units

GL 205 Invertebrate Paleontology
Study of fossil invertebrates stressing the important fossil phyla and their morphology, classification, occurrence and use in interpretation of geologic and evolutionary history. Laboratories, field trips.
Prerequisites: GL 101 and/or two biology units

GL 210 Mineralogy
Recognition of minerals in hand-specimen and understanding their classification, crystal structures, chemical compositions and stability relations. One laboratory session per week.
Prerequisite: CH 101

GL 211 Petrography
Petrographic microscope and hand-specimen study of the principal types of rocks and discussion of their chemical and mineralogical characteristics and classification. Two laboratory sessions per week.
Prerequisite: GL 210

GL 212 Petrology
Examination of igneous and metamorphic rocks in hand-specimen and thin-section with discussion of their geologic setting, field relations, mineralogy, chemistry and phase equilibria. Two laboratory sessions per week.
Prerequisites: GL 101 and CH 102 or 205

GL 220 Structure of the Earth
The mechanical principles of rock deformation; the description, classification and origin of major structures of the earth's crust; and the relationships of crustal structures to plate tectonics and

the earth's interior. Eight hours of laboratory per week.
Prerequisites: GL 100; CH 101, GL 200 recommended.

Advanced Units

GL 300 Principles of Stratigraphy
Description of sedimentary rocks in the stratigraphic column, methods of correlation, interpretation of origin of rock units, and the historical and philosophical development of the geologic time scale. Laboratory, field trips.
Prerequisites: GL 101, three other geology units and/or permission of the instructor

GL 301 Sedimentology
Study of the origin of sediments and sedimentary rocks, including sedimentary processes, depositional environments, post-depositional influences and sedimentary rock classification, with principles and methods of study emphasized. Eight hours of laboratory per week.
Prerequisites: GL 212 and CH 110

GL 320 Introduction to Geochemistry
Physical and chemical principles applied to geologic processes. Topics include phase transformations in minerals, geochronology and geothermometry. Two laboratory sessions per week.
Prerequisites: GL 212, CH 110 or units in physical and inorganic chemistry

GL 321 Economic Mineral Deposits
Study of the major types of metallic and nonmetallic mineral deposits including origin, geologic setting, structural controls and distribution.
Prerequisites: GL 211, 220
Co-requisite: GL 212

GL 400 Senior Seminar
Examination of the current state of the geologic sciences, including historical development and current evidence for major theories.
Prerequisites: Senior standing, six units in geology

GL 401 Special Topics
Examination of an area not regularly studied in the departmental offerings. Examples have been "Geomorphology," "Geophysics," and "Case Studies in Environmental Geology."

GL 410 Geological Research
Field or laboratory investigation of a specific geologic problem. Methodology and principles of interpretation are necessary for successful completion of the unit, and a final report must be submitted.
Prerequisite: Permission of the staff

Faculty: Professor Trexler; Associate Professor Washburn; Assistant Professor Sipling

History

While the History Department offers a core of survey and political history courses, it supplements this base with other studies emphasizing the socio-economic and cultural aspects of man's past. With particular strength in American and European studies, the department is designed to provide sound preparation for a wide variety of vocational interests, including those of historian, teacher and lawyer, as well as those in business and government.

In addition to traditional survey courses, the department offers selected in-depth studies, examples of which include the seminars on Winston Churchill or the Nuremberg Trials. Interdisciplinary courses, such as the Urban Studies offering, help to illustrate the interrelationships

among history and the social sciences. Other specialized interests may be pursued in Classical and Medieval Studies, Russian Area Studies, or Peace and Conflict Studies, while off-campus involvement is available through the Washington Semester, United Nations Semester, Urban Semester and Junior Year Abroad programs. Students are encouraged, of course, to explore areas of interest not covered by regular courses through independent studies and tutorials.

HS 100 Ancient Civilization: 3000 B.C.—500 A.D.
A survey of Mesopotamian, Egyptian, Minoan, Mycenaean, Greek and Roman civilizations.

HS 104 Medieval Civilization: 500—1500
A survey of intellectual, political, social and economic changes in Europe from the fall of the Roman Empire through the 15th Century.

HS 105 Modern Europe to 1815
A survey of the chief historical changes from the reformation through the fall of Napoleon, with special emphasis on the political, religious, economic and intellectual.

HS 106 Modern Europe since 1815
Introduction to modern European history from the post-Napoleonic era through the reconstruction after World War II.

HS 115 United States to 1877
Concerned with the broad sweep of U.S. history from colonial beginnings through Reconstruction, the unit aims at laying foundations for understanding our national heritage.

HS 116 United States since 1877
Continuing the national story to the present, the unit explores the many-sided course of domestic and foreign affairs, emphasizing the U.S. role as a great power.

HS 207 English History to 1547
A survey of English history from the Romans through Henry VIII, with heaviest emphasis on the development of the English Constitutions, Parliament, and Common Law.

HS 208 English History since 1547
Special emphasis is on the constitutional struggles between crown and Parliament, but additional study includes Britain's involvement in the rise of science and other intellectual movements, Imperialism, the Industrial Revolution and artistic and philosophical contributions.

HS 209 History of Russia to 1917
Study of the evolution of the Russian state and peoples from earliest times through the collapse of the Tsarist Empire during World War I.

HS 210 History of Soviet Russia
Coverage of the Bolsheviks' 1917 seizure of power and subsequent development and implementation of social, economic and political policies which have established the USSR as a major world power.

HS 220 Latin America to 1824
Delineation of the colonial era in the New World through the emergence of independent states in the area.

HS 221 Latin America since 1824
Presentation of the developments, rivalries, triumphs and disasters of the Latin American peoples since independence.

HS 222 The History and Culture of Mexico
A survey of political, social and cultural development, primarily since 1821.

HS 230 Winston Churchill: Triumph or Tragedy? (VCU)
Through movies, records, his own writings and works of opponents and friends, an attempt is made to understand this most controversial figure and the age in which he lived.

HS 231 The Fascist Era, 1918-1945 (VCU)
Fascism is studied as a European phenomenon of the interwar period, with particular emphasis on German National Socialism.

HS 240 War and Conscience in America (Peace and Conflict Studies)
Study of American moral opinion about war and our involvement in it.

HS 241 Religious Forces in American History
See RL 204.

HS 250 American Urban Studies
A survey of urban affairs from colonial times to the present, offering both an interdisciplinary approach and an opportunity to write a major research paper on one's own locale.

HS 301 European Intellectual History Since 1815
A survey of major currents in European thought from Romanticism to the present.

HS 310 American Social and Cultural History
Study of social reform movements and ideas, myths and popular opinions in their social contexts.

HS 315 The Renaissance
A seminar involving research papers and exploring early aspects of the transition from medieval to modern times. Emphasis is on the rise of city states and the accompanying cultural developments in Italy in the 14th, 15th and 16th Centuries.

HS 316 The Reformation
A seminar studying the basic Protestant and Catholic theology but equally concerned with the consequences of and reactions to the Reformation: Philip of Spain and Elizabeth I, the doctrine of sovereignty, the Age of the Baroque and the rise of modern science.

HS 317 The Trials of the Major Nazi War Criminals at Nuremberg (Peace and Conflict Studies)
A research seminar attempting to grasp the legal and moral issues raised at Nuremberg through a study of the Trial records.

HS 318 Witchcraft in Western Civilization
A seminar using readings in original sources and in current literature to explore the origins and development of the belief in witchcraft in 16th and 17th-Century Europe and America.

HS 321 American Diplomatic History to 1900
Examination of the basic, shifting assumptions behind U.S. foreign relations and of how policies were transformed into actions.

HS 322 American Diplomatic History since 1900
A tracing of the increasingly complicated role of the nation in world affairs as the nation became a super power.

HS 325 Contemporary American History
Study of trends and movements since World War I, with special emphasis on black history, economic developments and the military.

HS 330 Blacks and the Cities in 20th Century America
The intertwined history of the growth, trends and problems of blacks in the larger cities.

HS 402 Special Topics
Units designed to supplement the regular departmental program by exploring topics and areas not regularly scheduled. Examples have included "Tricolor to Red Star: Studies in European Revolution" and "In Search of Justice: Great Trials in Modern History."

HS 404 The Historian as Detective
Introduction to historical methodology and how to deal with evidence.

Faculty: Professors Binder, Crosby, Kaylor, Kipphan and Smith; Associate Professors E. Cherry and Post

Mathematics

Unit offerings within the department are sufficiently varied to enable students to select programs tailored to their own individual interests and needs. The offerings allow students to develop programs meeting requirements for graduate study, certification for secondary teaching, or for other employment opportunities. Many students choose joint programs in mathematics and economics, mathematics and business, physics and mathematics, or computer science and mathematics.

The department faculty consists of five persons with backgrounds in theoretical mathematics, applied mathematics, and computer science.

Among the department's facilities is a small meeting and seminar room which may also be used by students for study or for work on problems. The academic computer center, housing a PDP 11/40 computer with keypunches and plotter, is adjacent to the department offices, and the department itself has a Hewlett-Packard HP-65 programmable calculator for use in the classroom when needed for numerical work. The Myers Science Library contains 1600 mathematical books and 33 periodicals, including every book recommended by the Mathematical Association of America for a four-year college.

MA 101 Introduction to the History and Methods of Mathematics
Introduction to the nature of mathematics, the evolution of mathematical thought, and the significance of its system of values.

MA 102 Number Systems
Study of the development and structure of the natural number, rational number, real number, and algebraic systems, including the historic role of these concepts in the development of mathematics and science.
Prerequisite: High school algebra

MA 103 Finite Mathematics
Introduction to elementary logic, set theory, vectors and matrices, with major emphasis on elementary probability and its applications. Offered in two versions emphasizing applications to biological and social sciences or to business and economics.
Prerequisite: High school algebra

MA 104 Linear Algebra
Introduction to systems of linear equations, matrices, determinants, vector spaces, linear transformations, characteristic values and characteristic vectors, and applications.
Prerequisite: High school algebra

MA 105 Calculus I
Introduction to calculus, including differentiation and integration of elementary functions of a single variable, limits, tangents, chain rule, rates of change, maxima and minima, area, volume and applications.
Prerequisites: Successful completion of departmental competencies in high school algebra and trigonometry

MA 115 Mathematical Analysis for Business and Economics
Introduction to the differential calculus of functions of one or more variables, with applications to business and economics.
Prerequisite: Successful completion of departmental competencies in high school algebra

MA 201 Calculus II
Multivariable calculus, including vectors in three dimensions, curves in space, functions of several variables, partial differentiation, multiple integration and applications.
Prerequisite: MA 105

MA 202 Calculus III
Theory and techniques of calculus, including limits, continuity, sequences, infinite series, indeterminate forms, improper integrals, techniques of differentiation and integration and introduction to differential equations.
Prerequisite: MA 105

MA 203 Calculus IV
Vector analysis, including differential and integral vector calculus, Fourier series, boundary value problems and partial differential equations of mathematical physics.
Prerequisites: MA 104, 201, 202

MA 204 Probability
Introduction to probability theory and applications, including models, sample spaces, independence, conditional probability, random variables, expectation, moments, sequences and sums of random variables.
Prerequisite: MA 105

MA 205 Mathematical Statistics
Theory and applications of mathematical statistics, including sampling, estimation, confidence intervals, decision theory, regression, correlation, testing of hypotheses, design of experiments.
Prerequisite: MA 204

MA 250 Introduction to Theoretical Mathematics
Introduction to the theoretical nature of mathematics and its historical development, with special emphasis on methods and assumptions in mathematical proofs. Preparation for junior-senior level abstract mathematical units.
Prerequisites: MA 201, 202

MA 301 Differential Equations
Theory and applications of ordinary and partial differential equations, building upon the introduction to differential equations contained in the calculus sequence.
Prerequisite: MA 203

MA 302 Complex Analysis
Functions of a complex variable, algebra and geometry of complex numbers, analytic functions, Cauchy's integral theorem, series, residues, contour integration, conformal mapping and applications.
Prerequisite: MA 203

MA 304 Topics in Geometry
Axiomatic and/or transformation study of geometries selected from the following types: Euclidean, non-Euclidean, affine, projective, algebraic, and differential.
Prerequisites: MA 104, 250

MA 310 Real Analysis I
Introduction to analysis, including proofs of calculus theorems, study of metric spaces, Euclidean spaces, limits, continuity, uniform continuity, differentiation.
Prerequisites: MA 104, 250

MA 311 Real Analysis II
Further development of theory begun in MA 310, including Riemann-Stieltjes integral, sequences and series of functions, convergence and uniform convergence.
Prerequisite: MA 310

MA 312 Topology
Study of metric and abstract topological spaces, point sets, compactness, completeness, connectedness, continuity, classification of topological spaces and Hausdorff, regular and normal spaces.
Prerequisites: MA 310 or MA 104, 250 and permission of the instructor

MA 313 Abstract Algebra I
Algebraic properties of the real numbers and their generalizations, including introduction to groups, rings, fields, lattices and modules.
Prerequisites: MA 104, 250

MA 314 Abstract Algebra II
Further development of systems introduced in MA 313, including topics from solvable groups, p-groups, extension fields, ideals, factor spaces, module theory, advanced linear algebra.
Prerequisite: MA 313

MA 400 Special Topics
Content varies with student interest. May be taken more than once for credit. Recent topics: "Number Theory," "Combinatorics," and "Computer Treatment of Mathematical Systems."
Prerequisite: Permission of the instructor

Computer Related Courses

MA 110 Introduction to Computer Science
Introduction to the use of computers and their application in a variety of disciplines. Primary programming language will be BASIC or FORTRAN.
Prerequisite: High school algebra

MA 210 Computer and Program Structure and Assembler Programming
Study of the basic structure of machines, machine languages and assembler language programming systems.
Prerequisite: MA 110

MA 211 Computer Treatment of Data
Study of the computer in the treatment of data (estimation of parameters, hypothesis testing, analysis of variance) using primarily student-written programs. The theory is verified with computer experiments.
Prerequisite: MA 110

MA 220 Discrete Computational Structures
Discussion of the mathematical structures (semigroups, groups, graphs, finite state machines, Boolean algebras and formal languages) and their applications to the theory of computers.
Prerequisites: MA 104, 110, 210

MA 303 Numerical Analysis
Theory and laboratory work in numerical methods, including numerical error, interpolation and approximation, numerical differentiation and quadratures, solution of equations, non-linear and linear systems and differential equations.
Prerequisites: MA 104, 110, 201, 202

MA 320 Computational Data Structures
Discussion of important data structures (stacks, queues, lists, trees, arrays) and programming practice in their use in various applications.
Prerequisite: MA 220

MA 321 Programming Languages
A systematic approach to the study of programming languages, emphasizing the underlying concepts of these languages.
Prerequisite: MA 220

Faculty: Associate Professors Bowser, Fagot and M. Heller; Assistant Professors Cauffman and Esch

Philosophy

The Department of Philosophy seeks to engage students in those kinds of careful and critical thinking which relate to the total life experience: logic, ethics, aesthetics, methods of knowing, and levels of being. Hence, in addition to fairly standard introductory courses, the department develops offerings of special interest to students in such diverse areas as biology, psychology, economics and business, education and mathematics. Students seeking more specialized professional training in philosophy pursue individual, upper-level

tutorials and independent studies with members of the philosophy faculty.

PL 105 Introductory Logic
Analysis of practical reasoning skills, including a systematic approach to the analysis of typical informal arguments and the meaning of everyday claims and terms. Also includes Aristotelean logic, Venn diagrams and an introduction to the basic theorems and techniques of symbolic logic.

PL 110 Freedom and Individuality
An introductory unit which examines major philosophical and literary concepts of individuality and the implications of such concepts for the possibility of freedom of choice and action.

PL 201 Plato and Aristotle
Historical and critical examination of the two founding fathers of western philosophy, examining their attempts to resolve the perennial puzzles about knowledge, reality and value.

PL 202 Modern Philosophy—Sense and Rationality
Selections from such philosophers as Bacon, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume and Kant are read and interpreted against the background of the rise of modern science with emphasis on the problem, "What is the scope and validity of knowledge?"

PL 208 Symbolic Logic
Introduction of the principles and techniques of symbolic and mathematical logic, development of the skills necessary for the understanding of axiomatic systems and their role in the formal sciences, and examination of the significance of recent advances in logic. PL 105 or background in mathematics is helpful preparation.

PL 304 Existentialism
Philosophers such as Kierkegaard, Nietzsche, Heidegger and Sartre are studied as an introduction to existentialist thought. Theistic and atheistic types are considered, as is the significance of existentialism as a contemporary philosophy.

PL 410 Special Topics
A seminar on a special problem or area not covered in a regularly offered unit. Possible topics: "Aesthetics," "Ethics and Mental Illness," "Kant," "Philosophy of Law" and "Philosophy of Religion."

Faculty: Professor Wagoner; Associate Professor Hartman; Assistant Professor Lewis

Physical Education

Although the department does not offer a curriculum within which a program of emphasis may be arranged, its faculty members offer units in a number of other programs throughout the College. In addition, the department is responsible not only for the intercollegiate athletic program, but for the popular and vigorous intramural program in which a high percentage of the student body participates.

At present, units taught by members of the department faculty are:

SO 205 Special Topic: Sociology of Sport
Exposure to and study of the phenomenon of sports in American society, focusing on the influence of sports on today's society in terms of economics, politics, education, the family and religious institutions.

ED 212 Physical Activities for Handicapped Children
See Education listings

PE 300 Coaching Methods and Philosophy
Dealing with the organization and administration of athletic activities programs in colleges and schools, the unit offers exposure to different coaching methods and philosophies as well as coaching skills and techniques in various sports.

Faculty: Assistant Professors Meditch, Nadzak and Rossi; Mr. R. D. Reilly

Physics

Physics is that branch of natural philosophy involved with studies of the fundamental relationships among such quantities as time, space, energy and matter. These relationships are fundamental to an understanding of the other, newer, natural sciences such as biology and chemistry. One of the goals of the Physics Department, therefore, is to provide students with insight into the reasoning employed in the physical sciences. Thus the core courses of the department are rigorous in their logical and mathematical development.

Department facilities, located in the north wing of Brumbaugh Science Center, include four large teaching laboratories, 12 smaller research laboratories, a classroom and a seminar room. The teaching labs are well equipped for electrical, optical and electronic studies, with major equipment holdings for optical spectroscopy and vacuum evaporated thin film studies.

The department has joint programs in engineering sciences with Columbia University, Georgia Institute of Technology and Washington University in St. Louis.

PC 100 Astronomy—Man's Place in the Universe (VCU)
Topical, value-centered exposure to astronomy for humanists.

PC 101 Introduction to Astronomy
Introduction to the science and technology of astronomy and its relation to the other physical sciences.

PC 208, 209 Introductory Physics (1 unit each)
A two-unit sequence introducing basic principles of classical physics, including studies of forces, fields, energy, in motion and at rest. The associated laboratories are designed to develop independent reasoning and manual skills as applied to measurements of physical phenomena.
Prerequisite: MA 105

PC 210, 211 Introductory Physics (1 unit each)
A sequence similar to PC 208, 209 except that calculus is not assumed.

PC 212 Electronics
Introduction to the theory and application of transistor electronics, starting with basic AC and DC circuits and test equipment operation. The unit explains the principle of operation of the power supply, amplifier, oscillator and other circuits, and an associated laboratory involves construction and measurements upon the various circuits.

PC 213 Modern Physics
Introduction to selected topics such as quantum theory of radiation, relativity, models of atoms and nuclei, radioactivity, nuclear energy and elementary particles.

PC 312 Mechanics
Study of classical mechanics including Newtonian

Mechanics, Lagrangian and Hamiltonian Dynamics, special theory of relativity and many particle systems. Emphasis is on developing ability in analyzing physical problems and on learning a variety of approaches involved in solving these situations.
Prerequisite: PC 209 or 211; *Corequisite:* MA 202

PC 313, 314 Electromagnetic Fields and Waves (1 unit each)
Development of an understanding of electromagnetic phenomena by considering electrostatic fields in vacuum and materials, magnetic fields and their origin, and magnetic materials. These phenomena are combined using Maxwell's equations, and the resulting wave properties are studied.
Prerequisite: MA 203; *Corequisite:* PC 213

PC 414 Theoretical Physics
Study of the consequences of special relativity in classical and modern physics.
Prerequisite: PC 312; *Corequisite:* PC 313

PC 415 Special Topics
Units of variable content, depending on student interest. Examples are "Optics," "Thermodynamics," "Solid State Physics," "Applied Group Theory" and "Nuclear Physics."

Faculty: Professor Norris, Associate Professor Pfrogner, Assistant Professor Engle

Political Science

Political science is the systematic study of the relationships among individuals and between individuals and their environment, focusing on the resultant political ideas, institutions and processes. The department maintains a strong professional program for its students and is also integrally related to the other social sciences. Furthermore, the wide range of offerings complements an interest in the sciences, the humanities, or the general liberal arts education.

The department provides both a practical and theoretical orientation for the student, preparing him for graduate school, law school, or positions in governmental service or public administration. To fulfill this orientation, internships in public administration and law are available, allowing the student to relate directly theoretical knowledge to development of practical skills. Similarly, the Washington Semester, United Nations Semester and London Semester programs promote this process. These opportunities enable the student to blend his basic interest in political science with his concern for a post-collegiate career.

The study of politics encompasses information from both American and cross-national political experiences. In addition, an explanation of political phenomena is rooted in an understanding of theories and political action. Reflecting this perspective, the curriculum is organized around four basic dimensions: (1) American Government and Public Administration, (2) Political Theory, (3) International Politics, and (4) Comparative Politics. In addition, introductory courses, numerous special topics courses, and research seminars broaden the offerings and allow the student to design a program in political science that can be both diversified and intense.

PS 101 Political Decision Making
An introductory unit in which the process of decision making and conflict resolution is regarded as the core of political activity. Discussion centers on the nature and the stakes of politics, participants in politics, and performance of political systems.

PS 111 American National Government
An inquiry into the origin, purpose, structure and function of the national government. The unit offers practical knowledge of both the philosophy and functioning of the American political system by seeking a judicious balance between theoretical and factual information.

PS 201 Topics
Different intermediate topics are regularly offered, and the unit may be repeated with a different topic for credit. Examples are "African Politics" and "Alternative Political Futures."

PS 211 State and Local Government
Study of the structure, functioning and constitutional position of the states in the federal system. The three traditional content areas constitute a base from which an inquiry is made into recent revolutionary legal and demographic developments such as the Supreme Court redistricting decisions and the urban explosion. A third area of emphasis is the politics of state and local governments.

PS 212 Elections and Voting Behavior
Analysis of the question "Why do people vote as they do in a democracy?" Includes study of current literature in the area, small research projects, and active participation in an election campaign. Topics for discussion include the role of the media and the party, determinants of voting, the electoral system and tactics of campaigns.

PS 213 Law and Civil Rights
Study of civil rights in American society, emphasizing both theory and practice. Topics include freedom of speech and the press, minority rights, subversive activities, obscenity, sex discrimination, the right of privacy and the rights of the accused.

PS 222 Search for Political Order (VCU)
Examination of major Western political ideas and their moral implications since the Renaissance. Among the concepts discussed at great length are community, power, justice, law, political ethics and the relationship between ethics and political power.

PS 231 International Politics
The theory and practice of contemporary international politics. Discussions of the major concepts and issues are highlighted by topics such as nuclear deterrence, arms control, disarmament, international trade and aid, problems of regional integration, and conflict regulation.

PS 241 Comparative Politics: Systems
A systems approach to comparative study of political dynamics, institutions and processes of selected world political systems. Political ideologies, party systems, leadership styles and public policies are examined in terms of similarities and differences.

PS 242 Comparative Politics: Issues
Study of cross-national public policies and social change, concentrating on specific substantive public policy issues and on methodological problems of comparative research. Students are expected to do a paper dealing with an aspect of methodology.

PS 311 American Constitutional Law
Analysis of the Constitution in its historical setting, explaining the background of the document, examining carefully its meaning when drafted, and tracing its expansion by interpretation and amendment. Judicial decisions, legislative acts and executive policies that contribute to this process are examined.
Prerequisite: PS 111

PS 312 Public Administration
Study of the dynamics of administration, including structure, organization, financial and personnel management, methods of law enforcement, and public accountability of administrators.
Prerequisite: PS 111 or 101

PS 331 Analysis of American Foreign Policy
Introduction to the major interpretations of U. S. foreign policy and analysis of its sources. The aim is to increase student insight into the types, character and roots of American international affairs. In addition to the normal academic work, an attempt is made to involve students in the decision making process.
Prerequisites: PS 111 or 101 or 231 or HS 322

PS 401 Special Topics
Different upper level topics are regularly offered and the unit may be repeated with a different topic for credit. Examples are "Political Parties and Pressure Groups," "Violence and the Political Order," "Participatory Democracy" and "Power Syndrome."
Prerequisite: Permission of the instructor

PS 402 Public Administration Internship
An opportunity to apply at the practical level concepts and theories learned in class and readings. Selected students work with chief administrative officers in Washington, D.C.; Winchester, Va.; State College, Pa. and Huntingdon, Pa. Competitive.
Prerequisites: PS 312 and permission of the department

PS 403 Research in Political Science
Focused investigation of selected areas in political science. Students choose their own topics and develop research designs. Some research and class time is devoted to methodological problems.
Prerequisites: PS 101 or 111; SS 101 or permission of the instructor

SS 401 Legal Internship
A program designed to complement students' academic preparation by tying theoretical work in class to the decision making process in a legal office. The program offers students interested in a legal career the opportunity to observe and participate in the daily activity of a law office under the supervision of both a trained lawyer and a faculty member.
Prerequisites: junior status and permission of the Pre-Law Committee

Faculty: Professor Klug; Assistant Professors da Silva and Vocke

Psychology

The purpose of the department is to provide exposure to the content, methodology and theoretical developments associated with the "study of behavior." The department is oriented toward the empirical, scientific study of both human and nonhuman organisms. The introductory psychology course, prerequisite to all other departmental offerings, attempts to give an overview of the many different areas of psychology. It does so in order to provide a general background and understanding which will allow the student to choose subsequent courses according to his or her personal and professional interests.

Courses in psychology are intended both for students desiring a general background and for those committed to a deeper understanding and considering graduate work in the area. The course offerings deal with behavior at all levels of analysis, from the smallest units of psychology (physiological psychology) to the largest units (social

psychology). In addition, there is ample opportunity for students to engage in research and experimentation. The department boasts research facilities which are rather exceptional for a school of Juniata's size, providing support for research on a broad variety of topics. The department also encourages interdisciplinary study in such courses as ethics and mental illness, conflict resolution, and population and behavior.

PY 101 Introduction to Psychology
A survey of the basic content and methodology in the field of psychology.

PY 201 Developmental Psychology
Consideration of the developmental and evolutions of behavior in animals including man. Emphasis is on the biological structure-function interrelationships which result in behavior.
Prerequisite: PY 101

PY 202 Personality (VCU)
Study of representative approaches to personality from the standpoint of theories and research. Emphasis throughout is on experimental evidence offered in support of various interpretations.
Prerequisite: PY 101

PY 203 Behavior Pathology
Initial consideration is given to traditional interpretations of "mental illness." A conceptual framework, based on a learning interpretation, follows and provides the theoretical bases for considering various behavior disorders.
Prerequisite: PY 101

PY 204 Testing and Measurement
Study of the theory and design of psychological tests. Special attention is paid to topics such as validity and reliability, practical issues involved in administration, scoring and interpreting selected psychological tests.

PY 205 Social Psychology
Study of the psychology of social behaviors, including selected areas of current research and theory such as conformity; social influence, group dynamics, attitude formation and change; prejudice; person perception, bystander intervention, social change, and collective behavior.
Prerequisite: PY 101

PY 301 Experimental Psychology—Sensation and Perception
A unit stressing methodology and experimentation with human subjects. Content covers both the classical and modern approaches to sensation and perception.
Prerequisite: SS 102

PY 302 Experimental Psychology—Learning
Consideration of a broad range of issues and content in the area of learning with emphasis on laboratory experiences characterizing the area.
Prerequisites: PY 101 and SS 102

PY 304 Comparative Animal Behavior
Study of animal behavior from the etiological, physiological and psychological points of view, analyzing learning, motivation and perception. Experimental design and methodology are stressed.
Prerequisites: PY 301 or 302 or permission

PY 305 Experimental Social Psychology
Examination of issues in social psychology from the laboratory perspective. Students participate in the design and execution of experiments in the area and interpret their findings.
Prerequisite: PY 205 or permission

PY 306 Physiological Psychology
The unit emphasizes neurobiology and neuroanatomy as they relate to sensory processes; motivation; reinforcement and learning and memory.
Prerequisites: PY 301 or 302 or BI 305

PY 307 Motivation
Examination of major concepts used in trying to create a coherent theory of motivation. The aim is to provide a framework within which research findings may be classified and evaluated.

PY 405 Special Topics
Considerations of areas of more specialized interest. Subject matter varies, and recent examples have been "Populations and Behavior," "Ethics and Mental Illness," "Total Institutions," "Psychology of the Urban Experience," "Non-Verbal Communications," "Cognition" and "Research."
Prerequisite: Permission

Faculty: Assistant Professors Drews, Masters and Wright; Ms. Goodstein

Religion

Juniata's Religion Department provides a non-denominational approach to the study of religion within the humanities. Its aim is to acquaint students with the sources, history, nature and relevance of religious thought and institutions. The department offers courses which may serve as a foundation for those who wish to do graduate work in religion, for those who plan to attend seminary, or for those who wish to take courses for their own enrichment or toward their programs of emphasis.

In addition to the faculty members listed below, the department includes the J. Omar Good Visiting Distinguished Professor of Evangelical Christianity, who offers several units each year. The occupant of this chair for the 1976-77 year is Dr. C. Samuel Calian of the University of Dubuque Theological Seminary.

RL 100 The Judaeo-Christian Heritage (VCU)
Critical study of the Judaeo-Christian tradition in terms of its history, religion, literature and contribution to Western culture.

RL 200 Religion and Modern Culture (VCU)
Analysis of religious themes in modern culture as reflected in literature, philosophy, ethics, science, religion, etc. The unit focuses on the most recent issues of religion and culture.

RL 201 Heresy and Dogma (VCU)
A survey of the formative period of Christianity through the time of Augustine, focusing on the evolution and formation of classic Christian thought and its conflict with heretical Christian ideas.

RL 202 Religious Sects of America (VCU)
Theological and social interpretation of a number of sects' religious ideas and institutions, aimed at acquainting students with the Mormons, Jehovah's Witnesses, Christian Scientists and others. The unit includes field trips.

RL 204 Religious Forces in American History
Evaluative and interpretive study of the intellectual, cultural, political and social impact of religion in America.

RL 208 Friends and Brothers: Studies in Historic Peace Churches (Peace and Conflict Studies)
Study of the Church of the Brethren, Mennonites and Quakers, with emphasis on pietism, pacifism, nonconformism and other distinctive characteristics of these movements. Includes field trips and field study and is team-taught.

RL 300 Oriental Religious Philosophies (VCU)
Presentation of the origins and development of the religious-philosophical heritage of India and

China, with special emphasis on Hinduism, Buddhism, Zen-Buddhism, Confucianism and Taoism.

RL 301 Psychology and Religion
Religion is approached psychologically, based on readings from James, Freud, Jung and others.
Prerequisite: units in psychology, religion or philosophy

RL 302 Mysticism and Religious Experience
Study of the phenomena of universal mysticism and religious experience in both Christian and non-Christian religions. The focus is on analysis of and differences between "mystical experience," "religious experience" and "drug experience."
Prerequisite: units in religion, psychology or philosophy

RL 303 Radicals and Reformers
A focus on the Protestant and Catholic reformations and on radical and spiritual reformations.
Prerequisite: courses in religion and/or history

RL 304 Essentials of the Christian Faith
Examination of the basic beliefs of Christian faith, aimed at confronting the confusion and lack of identity felt by many Christians today. A major goal is to establish criteria for religious feelings and experiences.

RL 305 Medical Ethics and the Professions
Through case studies and readings, a struggle with important life and death issues facing professionals and consumers. A basic aim is to discuss and develop a style of professional ethics within a Christian context, and practicing professionals are invited to participate in the classroom discussions.

RL 306 Christian Ethics in a Business World
Discussion from a Christian perspective of the values and ethics found in business and industry. Case studies and readings include study of the attitude and approach emphasized in *The Wall Street Journal*, and persons involved in business are invited to discussions.

RL 450 Special Topics
Offered when either students or the instructor wish to explore an area not normally covered by one or more regular units. Examples have been "Sociology of Religion" and "Religion and Society."

Faculty: Professor Kaylor; Associate Professor Nieto, Rev. Murray

Sociology and Anthropology

The discipline of sociology is the systematic study of human interaction, using both descriptive and analytic methods. It differs from other social sciences in that it focuses on *society*. All forms of group-related behavior from riot to religion, debutantes to delinquent gangs, warfare to welfare, are examined not in terms of what ought to be, but in terms of what *is*.

Anthropology, a much broader-based discipline, is concerned with the observation, description and analysis of all processes — physical, cultural and ecological — which make the human species what it is.

The department's offerings may be combined to meet three kinds of academic needs. There is the broad study of societies and cultures and their contemporary problems for the liberally-educated; a theoretical and conceptual orientation for pre-professional sociologists and anthropologists bound for graduate school; and rigorous training and field experience in social work for

those interested in careers in this helping profession.

SO 101 Social Institutions
Introduction to the discipline of sociology, with an emphasis on contemporary American society. Important sociological concepts are studied within the context of a particular institutional structure (e.g., family, community, education, political order), the selection of which varies from term to term according to the interests of students and instructor.

SO 151 Introduction to Anthropology
The unit is dedicated to the proposition that there are many ways of being human, all of which are adaptations to particular sets of conditions. Some of the trends and highlights of human development, both physical and cultural, are studied from an evolutionary perspective.

SO 203 Intergroup Relations (VCU)
Study of the way in which human groups form, organize, perceive and relate to other groups at both the community and national levels. Special attention is given to the principles involved in relations among racial, ethnic and cultural groups.
Prerequisite: SO 101 or 151

SO 204 The Family
Analysis of the socialization process and parent-child relationships, courtship and marriage, crises and problems, and the influence of social change on the family in cross-cultural perspective.
Prerequisite: SO 101 or 151

SO 205 Special Topics
See SO 405

SO 231 Social Problems and Social Welfare
Social welfare organization as an institutional response to social problems such as poverty, racism, mental illness, crime or drug abuse resulting from changes in society and culture. Social welfare is set in the context of historical development, i.e., philosophical, religious and humanitarian foundations, and the development of social service professions.
Prerequisite: SO 101

SO 251 Physical Anthropology
Analytic and descriptive study of the morphological development of the human species, and of the role of biological factors in the evolution of behavior, culture and society. Special attention is given to genetic and ecological mechanisms and to the nature and implications of structural variability.
Prerequisite: SO 151 or BI 100

SO 301 Social Stratification (VCU)
Theories and empirical studies of social differentiation and structured social inequality are examined in historical and contemporary societies. Differential class behavior, power and status relations, social mobility, and other salient issues are considered.
Prerequisite: SO 101 or 151

SO 302 Deviant Behavior
Study of the psychological and social conditions which tend to facilitate behavior deviation and of the response of society to these patterns. Crime, delinquency, mental illness and deviant social groups are examined as special instances of deviation.
Prerequisite: SO 101

SO 303 Corrections
Description and analysis of those social structures which relate to the legal offender from the point of apprehension to his or her resocialization in the community. Detailed attention is given to the origins and functions of the police, courts, probation, institutional and parole systems, and to rele-

vant research and experimental programs in these areas.
Prerequisite: SO 302

SO 331 Micro Social Work Practice and Processes
A focus on the problem-solving processes utilized in micro social work activity. The principles of interviewing, case diagnosis, counseling and treatment are reviewed as they relate to assisting individuals and groups in attaining adequate levels of social functioning.
Prerequisite: SO 231

SO 332 Macro Social Work Practice and Processes
A focus on the problem-solving processes involved in delivering service at the community level. Primary consideration is given to a systems analysis approach of community organization and to the techniques, strategies, etc., used in assisting communities in attaining effective levels of social functioning.
Prerequisite: SO 231

SO 333 Social Welfare Policies and Services
Conceptual study of the meaning, nature and scope of social policy as it relates to issues of social welfare. Methodological processes for the formulation, implementation and analysis of social policy are explored.

SO 351 Cultural Anthropology
Analysis of the nature of culture as an adaptive mechanism. Using cross-cultural comparisons of ancient-modern and primitive-complex societies, an effort is made to organize similarities and variations according to principles.
Prerequisite: SO 151 or 101

SO 405 Advanced Special Topics
Special topics are formal courses not regularly scheduled but offered upon sufficient student demand. Examples have been "Social Change," "The Community," "Sociology of Work," "Sociology of Religion," "Sociology of Sport," "Medical Sociology," "Cultural Ecology," "Introduction to Archeology," "Archeological Field Work," "Folk Societies," "The Study of Folklore" and "Prehistory of North America."

SO 430 Advanced Seminar in Social Work

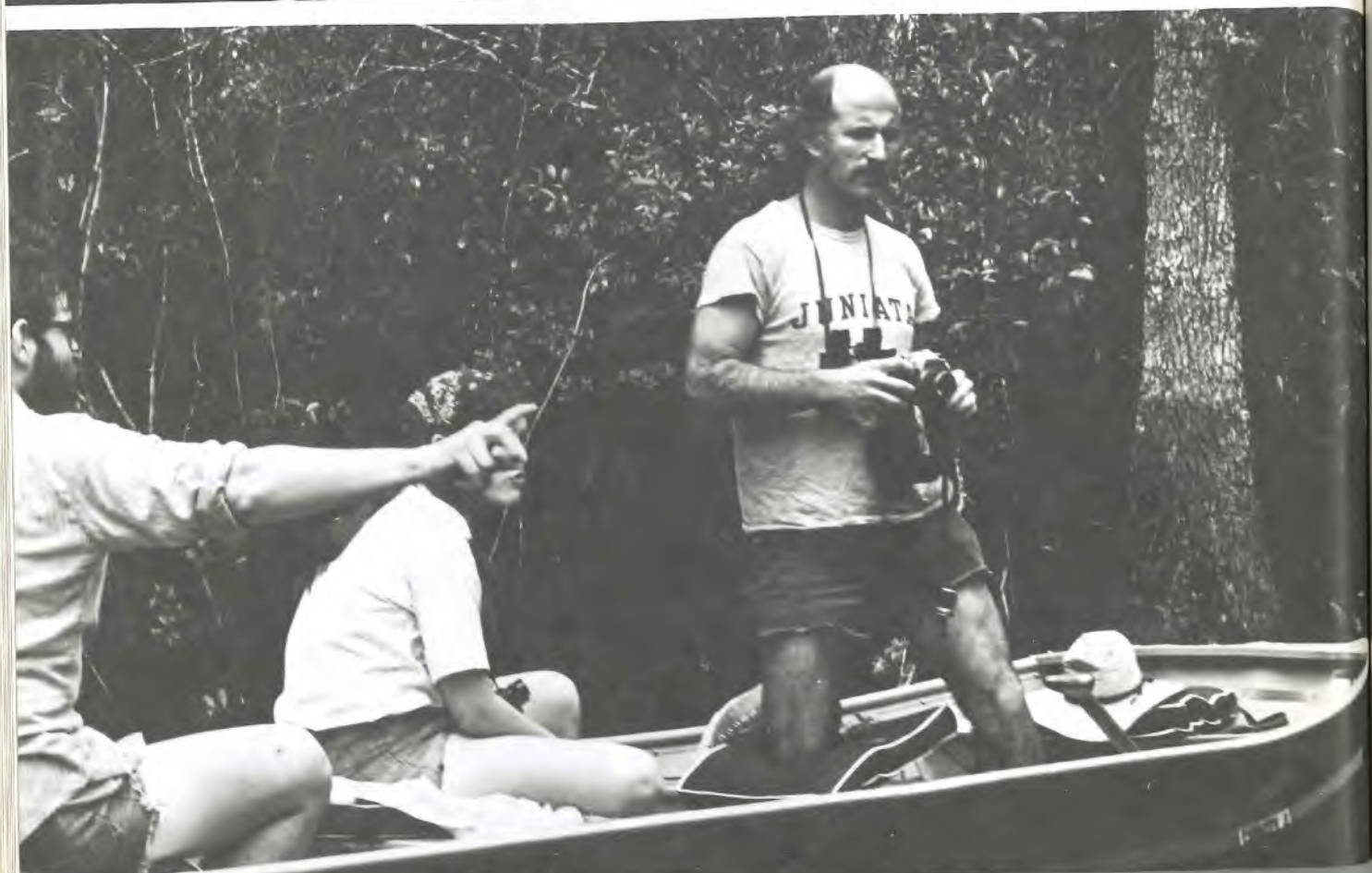
Adjunct courses: **(See page 44 for descriptions)**

SS 101 Social Science Research Methods

SS 102 Statistics for Social Science

SS 301-304 Social Service Agency Internships

Faculty: Professor Stroman; Associate Professor Heberling; Assistant Professors Clark and Giebel; Mr. F. R. Reilly



DIRECTORY

Faculty

The date in parentheses is that of first appointment to Juniata faculty.

Professors

BINDER, FREDERICK M., *Professor of History* (1975); A.B., Ursinus College, 1942; M.A., Ph.D., University of Pennsylvania, 1948, 1955; LL.D., Ursinus College, 1960; Litt.D., Wagner College, 1964; L.H.D., Rider College, 1966; Pd.D., Susquehanna University, 1969; additional study, New York University.

CALIAN, C. SAMUEL, *J. Omar Good Visiting Distinguished Professor of Evangelical Christianity* (1975); B.A., Occidental College, 1955; B.D., Princeton Theological Seminary, 1958; Ph.D., University of Basel, Switzerland, 1962; additional study, Ecumenical Institute of the World Council of Churches, Jung Institute of Analytical Psychology, The Graduate Institute of International Studies, Institute for Applied Psychological Behavior, Harvard Business School.

CHERRY, RONALD L., *Charles A. Dana Supported Professor of Economics* (1958); A.B., Juniata College, 1953; A.M., Ph.D., Princeton University, 1955, 1961; additional study, Princeton University, Harvard Business School.

CROSBY, KENNETH W., *Professor of History* (1948); B.S., Wilmington College, 1939; A.M., Haverford College, 1940; Ph.D., George Washington University, 1949; additional study, University of Havana, University of Pennsylvania.

*CROUCH, HOWARD H., *Professor of Education* (1963); B.S., The Ohio State University, 1949; Ed.M., Westminster College, 1953; Ph.D., The Ohio State University, 1964; additional study, University of Florida.

HUNTER, RICHARD E., *Professor of English* (1966); B.A., Ursinus College, 1945; B.D., Princeton Theological Seminary, 1948; M.A., Ph.D., University of Pennsylvania, 1951, 1953.

KAYLOR, EARL C., JR., *Charles A. Dana Supported Professor of Religion and History* (1958); A.B., Juniata College, 1946; B.D., Bethany Theological Seminary, 1949; A.M., University of Notre Dame, 1951; Ph.D., The Pennsylvania State University, 1963.

KIPPHAN, KLAUS, *Professor of History* (1965); A.B., Gymnasium Eberbach, Germany, 1959; A.M., Fairleigh Dickinson University, 1965; Ph.D., University of Heidelberg, 1969; additional study, University of Munich, Wake Forest College.

KLUG, HARRY V., JR., *Professor of Political Science* (1967); A.B., M.A., Ph.D., University of Iowa, 1948, 1949, 1950.

NOLAN, THOMAS J., *Professor of Economics* (1953); A.B., King's College, 1951; A.M., The Pennsylvania State University, 1953; additional study, The Pennsylvania State University.

*Sabbatical Leave, Winter Term, 1976-77

NORRIS, WILFRED G., *William I. and Zella B. Book Professor of Physics* (1958); B.S., Juniata College, 1954; Ph.D., Harvard University, 1963; additional study, University of Tuebingen, University of Maryland.

ROCKWELL, KENNETH H., *Professor of Biology* (1960); B.S., Juniata College, 1957; M.S., Brown University, 1960; Ph.D., The Pennsylvania State University, 1967; additional study, Stanford University.

RUSSEY, WILLIAM E., *Professor of Chemistry* (1966); B.A., Kalamazoo College, 1961; M.A., Ph.D., Harvard University, 1964, 1966; additional study, University of Bonn, Max Planck Institute, West Germany.

SCHETTLER, PAUL D., JR., *Professor of Chemistry* (1967); B.S., University of Utah, 1958; Ph.D., Yale University, 1964; additional study, Catholic University of Lille, France.

*SMITH, PHILBROOK W., *Charles A. Dana Supported Professor of History* (1955); A.B., A.M., Ph.D., State University of Iowa, 1951, 1952, 1967.

STAUFFER, JOHN N., *Professor of Psychology* (1968); B.S., Juniata College, 1936; M.A., University of Pennsylvania, 1942; Ed.D., The Pennsylvania State University, 1956; LL.D., Juniata College, 1964; L.H.D., Wittenberg University, 1968; D.H., St. Francis College, 1975; additional study, Harvard University, The Ohio State University.

STROMAN, DUANE F., *Professor of Sociology* (1963); A.B., Ohio Wesleyan University, 1956; S.T.B., Ph.D., Boston University, 1959, 1966; additional study, The Pennsylvania State University, Harvard University.

TREXLER, J. PETER, *Professor of Geology* (1962); A.B., M.S., Lehigh University, 1950, 1953; Ph.D., University of Michigan, 1964; additional study, Princeton University.

WAGONER, ROBERT E., *Professor of Philosophy* (1965); B.S., Manchester College, 1952; Ph.D., Harvard University, 1968; additional study, Bethany Theological Seminary.

WAMPLER, DALE L., *Professor of Chemistry* (1961); A.B., Bridgewater College, 1957; Ph.D., University of Wisconsin, 1962; additional study, Cambridge University.

ZIMMERER, ROBERT P., *Professor of Biology* (1961); B.S., University of Wisconsin, 1954; M.S., Cornell University, 1961; Ph.D., The Pennsylvania State University, 1966.

Associate Professors

BOWSER, JOHN D., *Associate Professor of Mathematics* (1961); B.S., Juniata College, 1957; M.S., West Virginia University, 1959; additional study, The Pennsylvania State University.

BRIGGS, CLAYTON E., *Associate Professor of Speech and Theatre* (1962); A.B., University of Maine, 1949; A.M., Whittier College, 1952.

CHERRY, ELIZABETH A. ELLIS, *Associate Professor of History* (1962); A.B., College of Wooster, 1956; A.M., Columbia University, 1957; additional study, Harvard University.

CHURCH, RALPH B., *Associate Professor of English* (1966); A.B., Wake Forest College, 1949; M.A., Columbia University, 1951; additional study, George Washington University.

DOLNIKOWSKI, GEORGE T., *Associate Professor of Russian and German* (1954); A.B., Juniata College, 1952; A.M., University of Pennsylvania, 1954; additional study, The Pennsylvania State University, Harvard University, Marburg University.

*Sabbatical Leave, Spring, 1977

FAGOT, WILFRED C., *Associate Professor of Mathematics* (1965); B.S., University of Texas, 1945; M.S., Tulane University, 1947; M.S., University of Chicago, 1952; additional study, The Pennsylvania State University.

FISHER, ROBERT L., *Associate Professor of Biology* (1963); A.B., San Jose State College, 1958; Ph.D., Cornell University, 1968.

FRIJTERS, CORNELIS J., *Associate Professor of French and Linguistics* (1970); Staatsexamen, Humanistic Gymnasium, Soesterberg, Holland, 1941; Candidaats degree, Ph.D., University of Nijmegen, Holland, 1954, 1957; additional study, The Sorbonne, Columbia University, University of Leiden, The Johns Hopkins University.

GOOCH, JAMES L., *Associate Professor of Biology* (1968); B.S., M.S., West Virginia University, 1960, 1967; Ph.D., University of Delaware, 1968; additional study, University of Chicago.

HARTMAN, DONALD T., *Associate Professor of Philosophy* (1968); B.A., Albright College, 1965; A.M., Ph.D., University of Michigan, 1967, 1972.

HEBERLING, PAUL M., *Associate Professor of Sociology* (1957); A.B., M.S., The Pennsylvania State University, 1948, 1950; additional study, The Pennsylvania State University, University of Colorado.

HELLER, BERNICE ENGMAN, *Associate Professor of Spanish* (1955); A.B., College of Wooster, 1953; A.M., University of Kansas, 1955; additional study, University of Havana, University of Wisconsin, Indiana University, The Pennsylvania State University.

HELLER, MAX N., *Associate Professor of Mathematics* (1958); B.S., The Pennsylvania State University, 1958; M.A.T., Indiana University, 1967; additional study, The Pennsylvania State University, University of Wisconsin.

HIRSCH, BRUCE A., *Associate Professor of Music* (1965); B.M., M.M., Westminster Choir College, 1958, 1960; additional study, University of Southern California.

LAKSO, JAMES J., *Associate Professor of Economics and Business Administration* (1970); B.A., Wittenberg University, 1967; M.A., Ph.D., University of Maryland, 1970, 1973.

LINTON, MARY RUTH MYERS, *Associate Professor of Music* (1942); A.B., Juniata College, 1938; A.M., Eastman School of Music, 1939.

*MITCHELL, DONALD J., *Associate Professor of Chemistry* (1967); B.S., Westminster College, 1960; Ph.D., Vanderbilt University, 1965.

NIETO, JOSE C., *Associate Professor of Religion* (1967); B.S., University of Santiago de Compostela, Spain, 1949; B.D., United Evangelical Seminary, Spain, 1956; Th.M., Ph.D., Princeton Theological Seminary, 1962, 1967; additional study, Presbyterian College, Northern Ireland; Pontifical University, Spain.

PFROGNER, RAY L., *Associate Professor of Physics* (1964); B.S., Juniata College, 1960; M.S., Ph.D., University of Delaware, 1964, 1971; additional study, University of South Carolina, University of Delaware.

POST, ERNEST H., JR., *Associate Professor of History* (1959); A.B., Hope College, 1948; A.M., Ph.D., Michigan State University, 1952, 1966; additional study, American University.

SENFT, JOSEPH P., *Associate Professor of Biology* (1972); B.S., Juniata College, 1959; M.A., Ph.D., State University of New York at Buffalo, 1961, 1965; additional study, University of Maryland Medical School.

WASHBURN, ROBERT H., *Associate Professor of Geology* (1966); B.S., M.S., University of

*Sabbatical Leave, 1976-77

Nebraska, 1959, 1961; Ph.D., Columbia University, 1966; additional study, Stanford University.

Assistant Professors

BARGERSTOCK, ANDREW S., *Assistant Professor of Economics and Business Administration* (1976); B.A., Muhlenberg College, 1971; M.B.A., University of Pittsburgh, 1972.

*CAUFFMAN, JOHN M., *Assistant Professor of Mathematics* (1970); A.B., M.A., Indiana University, 1965, 1966; additional study, Indiana University.

CHURCH, EVELYN H., *Assistant Professor of Spanish* (1966); A.B., Wake Forest College, 1949; M.A., Middlebury College, 1970; additional study, University of Dayton, University of Barcelona, Spain.

CLARK, MARTIN, *Assistant Professor of Sociology and Religion* (1973); B.A., M.A., Cambridge University, 1952, 1959; Ph.D., Harvard University, 1971.

CROCE, GERALD J., *Assistant Professor of English* (1969); A.B., Brooklyn College, 1966; M.A., The Pennsylvania State University, 1968; additional study, The Pennsylvania State University.

DA SILVA, MILTON M., *Assistant Professor of Political Science* (1969); B.A., Nasson College, 1965; M.A., Ph.D., University of Massachusetts, 1967, 1972.

DAVIS, D. BRUCE, *Assistant Professor of English* (1968); B.A., Juniata College, 1965; M.A., University of Maryland, 1968; additional study, The Pennsylvania State University, Columbia University.

DREWS, DAVID R., *Assistant Professor of Psychology* (1969); B.A., Denison University, 1965; M.S., Ph.D., University of Delaware, 1968, 1970; additional study, Duke University.

ENGLE, IRENE M., *Assistant Professor of Physics* (1969); B.S., M.S., Ph.D., The Pennsylvania State University, 1963, 1966, 1970.

ESCH, LINDA SUE, *Assistant Professor of Mathematics* (1976); B.S., Juniata College, 1968; A.M., Ph.D., Boston University, 1970, 1974.

FISHER, TOM L., *Assistant Professor of Chemistry* (1976); B.S., Old Dominion University, 1964; Ph.D., Iowa State University, 1970; additional study, Virginia Polytechnic Institute and State University.

GIEBEL, GREGORY, *Assistant Professor of Sociology* (1973); A.B., Lycoming College, 1964; M.B.A., Long Island University, 1967; M.A., The Pennsylvania State University, 1973; additional study, The Pennsylvania State University.

GOEHRING, DORIS PHIPPS, *Assistant Professor of Speech and Theatre* (1965); A.B., University of Pittsburgh, 1947; A.M., Columbia University, 1950.

GUSTAFSON, TODD D., *Assistant Professor of Biology* (1976); B.A., Jacksonville University, 1971; M.S., Ph.D., University of Wisconsin, 1973, 1976.

HOCHBERG, MARK R., *Assistant Professor of English* (1970); B.A., University of Pennsylvania, 1966; M.A., Ph.D., Cornell University, 1969, 1970.

HOFELT, WILLIAM L., JR., *Assistant Professor of English* (1966); B.A., Juniata College, 1965; M.A., University of Rochester, 1967; additional study, The Pennsylvania State University.

JAEGER, KLAUS A.G., *Assistant Professor of German* (1972); M.A., The Ohio State University, 1965; additional study, Kiel University, Exeter University, University of Massachusetts.

LEWIS, JANET R., *Assistant Professor of Philosophy* (1970); B.A., Wilson College, 1960; M.A., Bryn

*Sabbatical Leave, 1976-77

Mawr College, 1968; additional study, Bryn Mawr College.

*McBride, Alexander T., *Assistant Professor of Art* (1970); B.F.A., Rhode Island School of Design, 1962; M.F.A., Cornell University, 1964.

Masters, Henry G., *Assistant Professor of Psychology* (1968); B.A., University of Rochester, 1958; M.A., Emory University, 1961; Ph.D., The Kansas State University, 1968; additional study, University of Oregon.

Meditch, Carl, *Assistant Professor of Physical Education* (1974); B.A., DePauw University, 1959; M.A., State University of Iowa, 1961; additional study, Ball State University.

Nadzak, Walter, Jr., *Assistant Professor of Physical Education* (1969); B.S., Denison University, 1957; M.Ed., Xavier University, 1968.

Ondrejcak, Sally S., *Assistant Professor of Education* (1971); B.S., B.S., M.S., The Pennsylvania State University, 1968, 1969, 1971.

Reed, Ruth E., *Assistant Professor of Chemistry* (1976); B.A., Winthrop College, 1968; Ph.D., Virginia Polytechnic Institute and State University, 1974; additional study, Georg August Universität, The Johns Hopkins University.

Rossi, Dean M., *Assistant Professor of Physical Education* (1972); B.S., The Pennsylvania State University, 1961; M.S., West Virginia University, 1971.

Sabin, Robert G., *Director of Libraries* (1968); B.A., University of North Dakota, 1967; M.S.L.S., Clarion State College, 1968; additional study, Catholic University of America.

Sipling, Philip J., *Assistant Professor of Geology* (1974); B.S., Juniata College, 1969; Sc.M., Ph.D., Brown University, 1971, 1975.

†Troy, Jack G., *Assistant Professor of Art* (1967); B.S., West Chester State College, 1961; M.A., Kent State University, 1967; additional study, Philadelphia Museum College of Art, Alfred University, Kent State University.

Vocke, William C., *Assistant Professor of Political Science* (1974); B.A., Wittenberg University, 1968; M.A., University of South Carolina, 1975.

Wise, Charles W., *Assistant Professor of Economics and Business Administration* (1973); A.B., Ohio University, 1969; M.B.A., University of Pittsburgh, 1973.

Woodrow, Thomas W., *Assistant Professor of Education* (1967); B.S., Juniata College, 1958; M.Ed., Indiana University of Pennsylvania, 1966; Ed.D., The Pennsylvania State University, 1976.

Wright, Dale E., *Assistant Professor of Psychology* (1969); A.B., Chico State College, 1959; B.D., Berkeley Baptist Divinity School, 1962; Ph.D., University of Vermont, 1970; additional study, Western Michigan University.

Instructors

Alexander, William R., *Instructor in Economics* (1966); B.S., Juniata College, 1966; M.A., University of Minnesota, 1972.

Becker, Caroline, *Catalog Librarian* (1974); A.B., Southwestern College, Kansas, 1954; M.A., Northwestern University, 1957; B.D., Garrett Theological Seminary, 1958; Ph.D., Drew University, 1967; M.L.S., Kent State University, 1974.

Blaisdell, Denise, *Reference Librarian* (1972); B.A., Juniata College, 1971; M.A.Libr., California State University, San Jose, 1972.

*Sabbatical Leave, Fall, 1976
†Part-time

DORTSCH, JESSIANN F., *Instructor in Education* (1976); B.S., Western Kentucky University, 1970; M.S., Wheelock College, 1976.

†FLANARY, DAVID A., *Instructor in French* (1976); B.A., Vanderbilt University, 1967; M.A., University of North Carolina, 1969; additional study, The Pennsylvania State University.

GOODSTEIN, LYNNE I., *Instructor in Psychology* (1975); B.A., University of Pennsylvania, 1970; additional study, City University of New York.

MILLER, MARY E., *Instructor in Education* (1968); B.S., West Chester State College, 1938; M.A., Teachers College, Columbia University, 1942.

MURRAY, M. ANDREW, *Instructor in Religion* (1972); B.A., Bridgewater College, 1964; M.Div., Bethany Theological Seminary, 1968.

NOLLAU, LEE G., *Instructor in Economics and Business Administration* (1976); B.A., Juniata College, 1972; M.A.S., The Johns Hopkins University, 1975; J.D., Dickinson School of Law, 1976.

REILLY, F. ROBERT, *Instructor in Sociology* (1974); B.A., Susquehanna University, 1971; M.S.W., Marywood College School of Social Work, 1974.

REILLY, RICHARD D., *Instructor in Physical Education* (1972); B.S., University of Dayton, 1970; M.S., The Pennsylvania State University, 1972.

SALLY, DANA M., *Science Librarian* (1975); B.A., California State College, Pennsylvania, 1969; M.L.S., University of Pittsburgh, 1975; additional study, Indiana University.

SEIDER, SUSAN N., *Instructor in Education* (1975); B.A., M.S., Fredonia State University, 1973, 1975.

TOWER, IBROOK, *Instructor in Music* (1974); B.Mus., Peabody Conservatory of Music, 1970; M.Mus., Temple University, 1972.

†Part-time

Emeriti Faculty and Administration

Date in parentheses is that of appointment to emeritus status.

BLAISDELL, B. EDWIN, *Professor of Mathematics, Emeritus* (1976); B.S., Ph.D., Massachusetts Institute of Technology, 1932, 1935.

BRUMBAUGH, HAROLD B., *Vice President for College Relations, Emeritus* (1976); B.S., Juniata College, 1933; L.H.D., Juniata College, 1975.

BUTLER, GERTRUDE L., *Professor of Home Economics, Emerita* (1969); B.S., Keuka College, 1926; B.S., Juniata College, 1931; A.M., Teachers College, Columbia University, 1938.

DOYLE, ESTHER M., *Professor of English, Emerita* (1975); B.L.I., Emerson College, 1935; A.M., Boston University, 1940; Ph.D., Northwestern University, 1964.

DUBBEL, S. EARL, *Professor of English, Emeritus* (1954); A.B., A.M., Harvard University, 1912, 1913; Th.B., Th.M., Princeton Theological Seminary, 1925, 1926.

ELLIS, CALVERT N., *President, Emeritus* (1968); A.B., Juniata College, 1923; Th.B., Princeton Theological Seminary, 1927; A.M., Princeton University, 1927; Ph.D., Yale University, 1932; D.D., Bethany Theological Seminary, 1950; LL.D., Manchester College, 1956; LL.D., Juniata College, 1963; L.H.D., Bridgewater College, 1968.

HARTZLER, EVA R., *Professor of Chemistry, Emerita* (1976); B.S., Juniata College, 1932; M.S., Ph.D., The Pennsylvania State University, 1933, 1950.

HENRY, TOBIAS F., *Professor of Sociology, Emeritus* (1965); A.B., Juniata College, 1926; B.D., Bethany Theological Seminary, 1928; M.A., Ph.D., University of Pittsburgh, 1934, 1938.

HETTINGER, SARAH STEELE, *Librarian, Emerita* (1964); A.B., Juniata College, 1924; B.L.S., Drexel Institute of Technology, 1925.

JOHNSON, DONALD S., *Professor of Music, Emeritus* (1971); B.S. Mus. Ed., A.M., New York University, 1930, 1934.

KIRACOFE, EDGAR S., *Professor of Education, Emeritus* (1960); A.B., Bridgewater College, 1921; A.M., Ph.D., University of Virginia, 1925, 1932.

McCRIMMON, MARGARET F., *Professor of Modern Languages, Emerita* (1953); A.B., A.M., University of Toronto, 1920, 1921.

MILLER, HERBERT A., *Associate Professor of Economics, Emeritus* (1969); A.B., Lehigh University, 1926; M.B.A., Harvard University, 1928.

MUSSELMAN, MIRIAM A. SCHLEGEL, *Professor of Education, Emerita* (1975); B.S., Shippensburg State College, 1938; M.S., University of Pennsylvania, 1950; Ed.D., George Peabody College for Teachers, 1962.

OLLER, JACK E., *Professor of French, Emeritus and Director of Foreign Language Laboratory* (1965); A.B., Juniata College, 1923; A.M., The Pennsylvania State University, 1931.

ROCKWELL, DONALD M., *Professor of Chemistry, Emeritus* (1972); B.S., University of Vermont, 1927; Ph.D., Yale University, 1931.

SHULER, GRACE MADEIRA, *Catalog Librarian, Emerita* (1971); B.A., Juniata College, 1956; M.L.S., Carnegie Institute of Technology, 1957.

STAUFFER, JOHN N., *President, Emeritus* (1975); B.S., Juniata College, 1936; M.A., University of Pennsylvania, 1942; Ed.D., The Pennsylvania State University, 1956; LL.D., Juniata College, 1964; L.H.D., Wittenberg University, 1968; D.H., St. Francis College, 1975.

WILL, HOMER C., *Professor of Biology, Emeritus* (1963); A.B., Bridgewater College, 1920; A.M., University of Virginia, 1922; Ph.D., University of Pittsburgh, 1932; D.Sc., Juniata College, 1968.

YODER, PAUL R., *Professor of Physics, Emeritus* (1964); A.B., McPherson College, 1921; A.M., University of Kansas, 1922.

Board of Trustees

Date in parentheses is that of appointment to the board.

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Emeritus

Denton B. Emmert '36, Dearborn, Mich. (1959-62, 1963)
John B. Montgomery '21, M.D., Sc.D., Ped.D., Philadelphia (1950)

Terms Expire 1977

John C. Baker '17, LL.D., D.C.S., L.H.D., Essex Fells, N.J. (1936)
Edith Hartman Cutrell '27, Roslyn Heights, N.Y. (1957)
Calvert N. Ellis '23, Ph.D., D.D., L.H.D., LL.D., Huntingdon (1943)
George Fattman '58, Johnstown (1974)
C. Jewett Henry '29, J.D., Huntingdon (1959)
Willard H. Kimmel '37, Shelocta (1971)
Cecil E. Loomis, Zionsville (1967)
Thomas A. Martin, Washington, D.C. (1968)
Thomas R. Miller '36, Ph.D., New York, N.Y. (1967)
Jack E. Oller '23, Huntingdon (1974)

Terms Expire 1978

Donovan R. Beachley, Sr. '21, LL.D., Hagerstown, Md. (1945)
Earl D. Croner '38, Berlin (1975)
Charles C. Ellis '40, M.B.A., New York, N.Y. (1966)
Steven W. Glass '72, Hollidaysburg (1975)
Joseph R. Good '33, Hollidaysburg (1952)
Edwin L. Kennedy, L.H.D., New York, N.Y. (1969)
Leroy S. Maxwell, Sr. '36, J.D., Waynesboro (1961-64, 1970)
Lillian G. Raycroft '50, LL.B., State College (1975)

Terms Expire 1979

Charles C. Brown, Jr. '59, J.D., State College (1976)
Dale W. Detwiler, Roaring Spring (1949)
Warren F. Groff '49, Ph.D., D.D., Oak Brook, Ill. (1976)
Charles M. Rice, C.P.A., Altoona (1967)
Lester M. Rosenberger, LL.D., Narberth (1952)
Klare S. Sunderland '56, Camp Hill (1970)
John W. Swigart, Sr. '30, LL.D., Huntingdon (1950)
Francis W. Zimmerman '54, North Wales (1976)

Administration

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College Development

FOSTER G. ULRICH, JR., A.B., M.S., *Vice President for Development*
HELEN P. WEAVER, *Secretary to the Vice President*

CLAYTON N. PHEASANT, B.A., M.Div., *Director of Development and Church Relations*
DAVID A. KREIDER, B.S., *Director of Alumni Affairs*
CHARLES R. POLLOCK, B.A., *Director of Public Relations*
DEBRA L. PETERSON, B.A., *Assistant Director of Public Relations*
BARBARA M. ROWE, *Director of the Annual Support Fund*

Business Affairs

WILLIAM R. ALEXANDER, B.S., M.A., *Business Manager*

JOANNE M. PARK, *Secretary to the Business Manager*

WILLIAM C. RUTTER, B.S., *Controller*

ROBERT D. FISHER, *Bookstore Manager*

DOROTHY C. LEFFARD, *Chief Accountant*

STEVEN L. STOIANOFF, *Payroll Accountant*

HARRY A. SALTER, *Director of Data Processing*

KENNETH G. RABENSTEIN, *Superintendent of Buildings and Grounds*

IRVIN R. THOMAS, *Director of General Services*

CYNTHIA J. CLARKE, B.S., *Director of Institutional Research*

EDWARD J. STRAUB, B.A., *Director of Food Services*

Campus Minister

M. ANDREW MURRAY, B.A., M.Div., *Campus Minister*

Staff and Departmental Assistants

SANDRA C. BRECHBIEL, *Secretary,* Physical Education Department, Memorial Gymnasium
MARY JANE BROWN, *Secretary,* Division II Office, Good Hall
MARCIA S. CHRISTOPHER, *Data Processing Machine Operator,* Oneida Hall
LENORE D. CONLEY, *Assistant to the Director of Libraries,* L. A. Beeghly Library
M. JANE COOK, *Secretary,* I. H. Brumbaugh House
*HAZEL B. CROUCH, *Periodical Clerk,* L. A. Beeghly Library
LLOYD M. DELL, *Maintenance Foreman*
LOIS D. FLUKE, *Secretary to the Registrar,* Founders Hall
JANE B. FURRY, *Accounts Payable Clerk,* Business Office, Oneida Hall
*WILLIAM E. GERMANN, *Trainer and Golf Coach,* Physical Education Department, Memorial Gymnasium
C. DIANE GRINNELL, *Secretary,* Purchasing, Oneida Hall
VIVIAN N. HAMILTON, *Typist,* L. A. Beeghly Library
JAMES V. HARBAUGH, JR., *Equipment Manager,* Physical Education Department, Memorial Gymnasium
BETTY M. HARTMAN, *Receptionist & PBX Operator,* Founders Hall
RUTH W. HEATON, *Secretary,* Development Office, Founders Hall
DARLENE A. HENNEY, *Secretary,* Financial Aid Office, Founders Hall
DAWN M. HERZBERG, *Secretary,* Division III Office, Brumbaugh Science Center
SCOTT T. HIMES, *Postal Clerk,* Post Office, Ellis College Center
SUSAN S. HOCHBERG, *Secretary,* Placement & Career Planning, Ellis College Center
MARGARET G. HOLLAND, *Supervisor,* Housekeepers
VERNA N. HORNE, *Secretary,* Division I Office, Founders Hall
JEROME R. ITINGER, *Accounting Clerk,* Accounting Office, Oneida Hall
MARGARET K. JOHNSON, *Clerk,* Bookstore, Ellis College Center
*DORIS W. KURTZ, *Assistant,* Science Library, Brumbaugh Science Center
SUSAN A. LaVERE, *Secretary,* Ellis College Center
MARJORIE A. LAYTON, *Secretary,* Brumbaugh Science Center
MERLE W. LIGHTNER, *Security Officer,* Maintenance Building
*MARGARET B. LITZENBERGER, *Secretary,* Bookstore, Ellis College Center
MARY E. LLOYD, *Secretary,* Development Office, Founders Hall
DEBRA L. LYNN, *Secretary to the Faculty,* Third Floor, Founders Hall
DONALD L. McCLAIN, *Data Processing Computer Operator,* Data Processing, Oneida Hall
PHYLLIS M. McGINNIS, *Stockroom Assistant,* Brumbaugh Science Center
PATRICIA McMAHON, *Transcript Clerk,* Registrar's Office, Founders Hall
SUSAN B. MARTIN, *Secretary,* Admissions Office, Founders Hall
JOYCE H. PARKS, *Clerk,* Accounting Office, Oneida Hall
LINDA W. PAYNE, *Circulation Supervisor,* L. A. Beeghly Library
BARBARA A. RECK, *Secretary,* Accounting Office, Oneida Hall
MARCIA J. REYNOLDS, *Secretary,* Registrar's Office, Founders Hall
ROY C. ROSS, *Service Foreman*
MARY E. SNYDER, *Secretary,* Public Relations Office, I. H. Brumbaugh House
L'NOR S. SPECK, *Assistant to the Business Manager,* Business Office, Oneida Hall
TERRY A. STONER, *Audio Visual Supervisor & Instrument Technician,* Brumbaugh Science Center
RUTH M. WALKER, *Secretary,* Admissions Office, Founders Hall
NANCY S. YOCUM, *Clerk,* Print Shop, Oneida Hall

*Part-time

Scholarships

Each year, the College awards a number of scholarships to aid students of superior academic attainment towards graduation. A number of scholarships have been established by alumni and friends of the College through funds contributed for that purpose.

Alumni Annual Support Fund Scholarships (1976). Provided through the traditionally generous support of the Juniata Alumni Association, at least twenty (20) scholarships ranging in value from $200 to $1,000 per year are awarded to members of each entering class regardless of financial need. Consideration is based on class rank, achievement as shown through the SAT or ACT, and demonstrated levels of character, leadership and citizenship. Awards are renewable for up to four years provided a specified grade point average is maintained.

Alumni Scholarships (1949). The Alumni Fund provides $1,200 for scholarships. An award is made annually to a promising entering student and distributed to the student in equal parts over a four-year period.

The Jennie C. and Francis Baker Scholarship (1946). Children of the late Francis Baker and Jennie C. Baker of Everett, Pa., are providing a scholarship fund of $155,434, the income of which is used to assist worthy young people at Juniata. Preference is given to residents of Bedford County.

Robert C. Baker Fund (1976). A scholarship fund of $125,000 has been established from the residue of deferred gifts, and gifts from the family and friends of Robert C. Baker '21. Mr. Baker was former Chairman of the Board of American Security and Trust Company of Washington, D.C., and a member of the Juniata Board of Trustees. The income of this fund will be used to assist worthy young people at Juniata.

The Bethany Brethren Hospital Brethren College Scholarship (1959). Bethany Brethren Hospital, Chicago, makes available each year a tuition scholarship of $500 to a student who is entering the nursing or health-related professions. This is awarded on the basis of general aptitude and financial need.

Professor Jacob H. Brumbaugh Scholarship in Chemistry (1937). As a memorial to the late Professor Jacob H. Brumbaugh, teacher 1877-1924, Principal 1879-1881 and 1883-1893, Trustee 1884-1934, his son, the late Professor Norman J. Brumbaugh, established a fund to aid students majoring in chemistry who have completed the preceding year's work with distinction.

The Norman J. Brumbaugh Chemistry Scholarship (1954). In order to honor the memory of the late Professor Norman J. Brumbaugh, his former students, together with other friends, established a scholarship fund of $7,098, the income of which is to be used to assist students who are majoring in chemistry. Professor Brumbaugh, a member of the Class of 1906, was Chairman of the Department of Chemistry from 1925 until 1949.

Brumbaugh-Ellis Presidential Scholarships (1976). Named in honor of five of the eight Juniata presidents who have served the College with distinction — Henry B. Brumbaugh, Martin Grove Brumbaugh, I. Harvey Brumbaugh, Charles C. Ellis and Calvert N. Ellis — ten (10) scholarships of $1,500 per year are awarded to accepted applicants for each entering class regardless of financial need. Recipients must rank in the upper one-tenth of their secondary school classes and demonstrate excellent achievement through either the SAT or ACT. Awards are renewable for up to four years given appropriate levels of academic performance.

The Mary Eliza (Steele) Buckley Fund (1934). Contributed by the late Mrs. Anna T. Fletcher of Washington, D.C., in memory of her mother, Mary Eliza Steele Buckley, this fund provides for a scholarship of $150 each year to a student selected by the President of the College.

The Philip Cabot Scholarship (1936). Through the generosity of the late Professor Philip Cabot of Harvard University, the College awards annually a scholarship of $50 to a graduate of some recognized secondary school, whose qualifications give promise of superior college achievement.

The Charles J. Cherry Memorial Scholarship (1956). A fund of $9,000 established in memory of the late Charles J. Cherry, of Lewistown, Pa., by his widow and son provides a scholarship for a student from the Middle District of Pennsylvania of the Church of the Brethren.

Cresswell-Shellenberger Scholarship Fund (1971). Through a bequest, the late John E. and Beulah Cresswell Shellenberger

'19 provided $62,965 for endowed scholarships. In awarding these scholarships, preference is to be given to students majoring in science.

The Robert B. and Irene S. Curry Scholarship Funds (1974). Former residents of Hollidaysburg, Pa., Mr. and Mrs. Robert B. Curry provided, through a bequest, two scholarships at Juniata. An amount of $30,000 was designated for the Robert B. Curry Scholarship and $20,000 for the Irene S. Curry Scholarship. Preference is to be given to students from Blair County.

The Charles C. Ellis Memorial Scholarships (1951). A fund of $25,804 was established by the friends and alumni of Juniata as a memorial to the late Dr. Charles C. Ellis, who had served the College as teacher, Vice-President, President, President Emeritus, and Trustee from 1894 until his death in 1950. Awarded to students who have demonstrated unusual competence in scholarship and good citizenship irrespective of need.

The J. Walter Englar Fund (1937). By the will of the late J. Walter Englar of New Windsor, Md., the income from the $26,744 residue of his estate is devoted to scholarships for young people from the State of Maryland. Provision is made for others to become the beneficiaries in case the entire income is not needed by Maryland students.

The First National Bank of Mapleton Scholarships (1974). Two $500 scholarships are provided each year by the First National Bank of Mapleton Depot, Pa. Recipients are selected for their financial need and academic and personal merit. Preference is given to students from the communities served by the bank.

The Anna Fisher Scholarships (1953). The income of a fund of $25,000, established by the late Miss Anna Fisher, of Huntingdon, Pa., is designated for the assistance of students according to a preferential rating: first, to members of the United Presbyterian Church in the United States of America, especially residents of Huntingdon or vicinity; second, to students who expect to engage in religious work; and third, other students at the discretion of the President of the College.

The Benjamin Fox Scholarship Award (1974). The Huntingdon division of the Elco Corporation provides $1,000 annually for a scholarship fund in honor of Benjamin Fox, founder and chief executive officer of the corporation. Preference will be given to eligible children of Elco employees or to worthy students from the Huntingdon area.

Rebecca Shank Funk Scholarship (1943). As a memorial to her grandmother, Rebecca Shank Funk, Miss Rello Oller '20, of Waynesboro, Pa., has provided an annual amount of $500 as a scholarship for music students.

The Henry R. and Florence B. Gibbel Scholarship (1934 and 1971). This scholarship fund was initially established by Florence B. Gibbel as a memorial to her husband. Both Mrs. Gibbel and her husband before her had served on the Board of Trustees of Juniata. At her death, the late Mrs. Gibbel provided an additional benefaction and the memorial fund was renamed. In line with the interests of the Gibbel family, income from the fund is awarded annually to "a student whose life exemplifies the virtues and values of the Christian faith."

The S. C. Gnagey Scholarship Fund (1965). Vicie Gnagey of Greenville, Ohio, widow of the late S. C. Gnagey '05, has contributed $5,000, the income from which is to be used as a scholarship fund to assist worthy young people interested in a Christian education, to be selected by the President of the College.

The Ida R. Gray Scholarships (1945). The late H. E. D. Gray of Waynesboro, Pa., provided scholarships totaling $600 in memory of his wife, Ida R. Gray. Preference is given to young people from Quincy and Washington Townships, Franklin County.

The W. P. and Ruth C. Harley Scholarship (1962). A fund has been established by the late William Price Harley '11, and his wife, Ruth Cunningham Harley '27, to provide financial assistance to worthy students who have completed satisfactorily the first year at the College. Preference is given to students preparing for teaching, the Christian ministry, or premedical science.

Jacob H. Hollinger Memorial Scholarship (1957). This fund was established as a memorial to Mr. Hollinger of Washington, D.C., a student at Juniata in 1895 and a member of the Board of Trustees 1949-52.

The Huntingdon Area High School Scholarships. Trustees of the College have provided that a scholarship of $200 a year for

two years shall be awarded annually to a member of the graduating class of the Huntingdon Area High School. The beneficiary is recommended by the Board of Education of Huntingdon.

The Minna K. Hutchison Memorial Scholarship (1960). The late Fred R. Hutchison, M.D., of Huntingdon, Pa., established a scholarship fund of $12,375 in memory of his wife. The income shall be given as a scholarship or scholarships for worthy premedical students. The scholarship shall continue for four years if the holder or holders maintain a satisfactory academic average.

Judson H. Kimmel, M.D. Memorial Scholarship (1973). This scholarship was established by Mrs. Deborah A. Kimmel of Rochester, Minn., as a memorial to her late husband who was a graduate of Juniata in the Class of 1964. This scholarship is for a senior who has demonstrated excellence in scholarship, independent research and a serious intent to pursue medical studies.

The King Science Scholarship (1945). This scholarship of $23,500, was established by the late Dr. Samuel J. King '28, and his wife, Frances Shelly King '29. The income is used for students with limited financial resources who demonstrate excellence in scholarship, personality, and character. Preference is given to students in chemistry and premedical subjects. Recipients of these scholarships hopefully will, when able, add to or establish similar funds at the College.

Flora C. Kirk Scholarship (1946). This fund was established by her daughter, the late Mary Kirk Spence of Philadelphia, a graduate of Juniata in 1919.

The Chalender Lee Lesher Scholarships (1945). This scholarship fund was established by the late Chalender H. and Maude Simpson Lesher, of Huntingdon, Pa., in memory of their son, Lt. Chalender Lee Lesher, United States Army Air Corps, a graduate of Juniata of the Class of 1939, who gave his life in defense of our country. The income of this fund of $32,656 is used for scholarships for worthy Huntingdon boys of intellectual ability who participate in athletics.

The Barbara Ann Linton Scholarship (1954). As a memorial to their daughter and granddaughter, Barbara Ann Linton, the parents, Mr. and Mrs. Richard W. Linton and the grandmothers, the late Mrs. O. R. Myers and the late Mrs. Stewart Linton, all of Huntingdon, have contributed to a fund in excess of $4,000, the income of which is used for students majoring in music.

The John William Linton Scholarship Fund (1974). A scholarship fund of $6,655 has been established by Mr. and Mrs. Richard W. Linton of Huntingdon in memory of their son, John William Linton, to provide financial assistance to worthy and needy students.

The Betty J. Lockington Scholarship (1976). Through a bequest of $10,000 from Betty Jane Lockington of Bellefonte, Pa., Juniata has established a scholarship fund in her memory. A retired teacher, Miss Lockington had received her first two years of college training at Juniata. The scholarship will be made available to a needy student of ability, with preference given to a graduate of the Bellefonte Area High School.

The Malcolm and Amy Long Ministerial Scholarship Fund (1944). A fund has been established by Malcolm A. and the late Amy Fahrney Long, of Baltimore, Md., as a scholarship for young men preparing for the Christian ministry in the Church of the Brethren. Preference is given to students from the State of Maryland.

Alexander Mack Scholarship Fund (1969). Members of the Church of the Brethren from the Atlantic Northeast, Middle and Western Districts of Pennsylvania are contributing to a scholarship fund, now in excess of $97,000, which was established in 1969 as a memorial to Alexander Mack, the Founder. Preference is given to members of the Church of the Brethren.

The James MacLaren Martin Memorial Scholarship (1964). Dr. and Mrs. Alex D. Martin of Colver established a scholarship fund of $50,000 in memory of their son and requested that the income be assigned annually to worthy and needy students in the sciences.

The Cora Myers McNay Memorial Scholarship Fund (1966). The late Isaac Newton McNay, husband of Cora Myers McNay, established a fund of $10,118.75 as a memorial to her to assist worthy young students at Juniata. The selection of the student is to be based on established qualifications of the College for scholarship. Need is to be an important factor.

Annie B. McPhail Scholarship Fund (1974). Through a bequest, an endowed scholarship fund of $5,000 has been provided by Annie B. McPhail of Long Beach, Calif. This endowment provides for the continuation of a scholarship for worthy young women attending Juniata which Miss McPhail has been supporting since 1949.

The Men's Fellowship Ministerial Scholarship for Middle District of Pennsylvania (1942). The Church of the Brethren Men's Fellowship organization of the Middle District of Pennsylvania provides a scholarship of $250 to be awarded annually to a ministerial student from the Middle District of Pennsylvania.

The Kersey Mierley Scholarship (1938). This scholarship was provided in memory of J. Kersey Mierley, son of the late Dr. and Mrs. C. V. Mierley, of Huntingdon, Pa., who graduated from the Juniata Academy in 1921 and was a student in the College from 1921-1923. He transferred to the Dental School of the University of Pittsburgh. Preference is given to young men from Huntingdon.

The A. Brown Miller Scholarship Fund (1976). A gift of $25,000 from the estate of the late Irene Pennington Miller has been designated as a scholarship fund in memory of her late husband, A. Brown Miller '10 of Cleveland, Ohio. Preference will be given to students who are members of the Church of the Brethren.

D. W. Miller, Inc. Scholarship (1973). Two scholarships of $500 each are provided annually by Dale W. Miller of Huntingdon for young men and women from Huntingdon County and surrounding areas.

The Neva M. Miller Memorial Scholarship Fund (1960). The late Thomas F. Miller of Huntingdon, Pa., established a scholarship fund of $18,000, in memory of his wife. The income is used for a scholarship or scholarships for young men with financial need and promise of success in life. Consideration is given to athletic ability and preference to the Huntingdon area. Recipients are selected by the President of the College.

The Robert E. Miller Scholarships (1950). The late Robert E. Miller of Johnstown, Pa., established a scholarship fund of $20,000, the income of which is to be used for the education of students from the Johnstown area who are members of the Church of the Brethren. Preference is given to those preparing for the ministry or missionary service.

Ruth Morgan Scholarship Fund (1975). A fund of $10,000 in memory of Mrs. Ruth R. Morgan is being established by Mr. and Mrs. Jack Shuck and family of Huntingdon. The scholarship will be used to assist needy and worthy students.

Mount Union Citizens' Scholarship Fund (1965). The scholarship was established by residents and businesses of the Mount Union Area during the Juniata Valley Campaign of 1965. The scholarship is to be used by one student per year from the Mount Union Area High School and is awarded to a deserving student who has financial need.

Oscar R. Myers Scholarship (1945). A scholarship fund of $5,330 has been established by the late Mrs. Oscar R. Myers and her daughter, Mary Ruth (Myers) Linton, in memory of Professor Oscar R. Myers, Professor of English at Juniata from 1905 to 1924, and Treasurer of the College from 1924 to 1942. The income is used for scholarships for students majoring in English.

The Eleanor B. North Scholarship Fund (1974). An endowed scholarship fund of $4,000 has been provided by Eleanor B. North of State College, Pa. The scholarship will be awarded annually to a young man or woman based on character, potentiality and need. Preference will be given to students preparing for the ministry or full-time Christian service. Miss North was a member of the English faculty at Juniata from 1925 to 1928.

The North American Indian Fund (1974). A fund has been established by Ethel T. McCarthy '02 of Duarte, Cal., formerly of Newville, Pa., to provide financial assistance for North American Indian students attending Juniata.

The Jesse R. Oller Scholarship (1944). By the will of the late Mrs. Ida R. Gray of Waynesboro, Pa., a scholarship of $250 is used for the education of a boy or girl from Waynesboro, Pa.

Ruth Whitehead Phillips Memorial Music Scholarship Fund (1964). A scholarship fund was established in 1964 from the estate of Earl Phillips as a memorial to his late wife, Ruth Whitehead Phillips. The income from this fund of $39,043 is to be used primarily for music students.

The Presser Foundation Music Scholarship (1966). A scholarship of $400 per year is given by the Presser Foundation of Philadelphia, Pa., to the outstanding music student as designated by the Chairman of the Department of Music.

The Anna Gertrude Price Scholarship (1960). The heirs of the late Edward J. Price, of Johnstown, Pa., have contributed $1,568 as a scholarship fund in memory of his daughter, Anna Gertrude Price, of the Class of '22.

The Forrest B. Queer Ministerial Aid Fund (1976). By the will of the late Forrest B. Queer of Johnstown, Pa., a restricted endowment fund of $7,317.88 has been provided for financial assistance for young men and women desiring to enter the Christian ministry.

H. E. Raffensperger Scholarship (1959). Horace E. Raffensperger, of Elizabethtown, Pa., has contributed $5,500, the income of which is used as a scholarship for a student preparing for Christian education as a profession.

The Rhoda Metz Rhodes Scholarship (1976). Dr. James Melvin Rhodes '38 of Sebring, Fla., established a scholarship fund of $40,046.27 in memory of his wife, Rhoda Metz Rhodes. At Juniata Dr. Rhodes was Field Representative 1939-40 and Dean of Students and Director of Admissions 1947-52. Mrs. Rhodes was Assistant Treasurer of Juniata from 1942 to 1952. The income shall be given as a scholarship or scholarships for worthwhile students. These scholarships shall continue for four years if the recipient or recipients maintain a satisfactory record.

M. Brayden and Edna B. Ridenour Scholarship Fund (1972). Through a bequest, the late M. Brayden and Edna B. Ridenour of Hagerstown, Md., provided $5,000 for a scholarship fund. Preference is given to a member of the Hagerstown Church of the Brethren or a resident of the State of Maryland.

The Harvey B. Rinehart Scholarship Fund (1962). Income from this fund of $9,000 is used to assist students in acquiring an education at Juniata. Preference is given to members of the Church of the Brethren of Waynesboro, Pa.

The Roaring Spring Blank Book Scholarship (1976). A grant has been provided by the Roaring Spring Blank Book Company to endow a scholarship fund of $5,000 to be available primarily to a student whose parent(s) is employed by Roaring Spring Blank Book Company. Should there be no such student enrolled at Juniata, the grant would be made available to a student of need from Blair County who is enrolled in economics and business administration, with preference to a student from Central High School, Martinsburg.

The John T. Ryan Memorial Scholarship (1950). As a memorial to his late father, who attended Juniata in 1903, John T. Ryan, Jr., of Pittsburgh, Pa., has established a scholarship fund of over $24,600 to provide financial assistance to young men and women from Huntingdon and Bedford Counties, Pa. Preference is given to residents of the Broad Top Region, particularly the town of Dudley.

The William A. Schlichter Award (1971). This award of $200 is granted to a senior man on the basis of his record for the first three years at Juniata. The award is named in honor of the late William A. Schlichter who was a member of the Class of 1971 until his untimely death on September 14, 1969. Selection for this award is based upon academic achievement, Christian character, dedication to Juniata and promise of future usefulness. These criteria reflect the qualities of the student life of William A. Schlichter.

The James A. Sell Ministerial Scholarship (1950). As a memorial to his father, Elder James A. Sell, the late Matthew W. Sell established a scholarship of $150 for young men and women preparing for the Christian ministry or missionary service.

The Richard M. Simpson Memorial Scholarship Fund (1960). Friends of the late Honorable Richard M. Simpson, a member of the United States House of Representatives from 1937 to 1960, aided by corporations and individuals across the country, established an endowment of $150,000, the income of which shall be used for scholarships at Juniata.

The Mary Kirk Spence Scholarship (1954). A scholarship of $200 has been established in the name of the late Mary Kirk Spence who was devoted to young people and their educational progress. Preference will be given to children of missionaries or ministers of the Church of the Brethren.

The Christine Springer Scholarship Fund (1958). Established by the late Christine Springer, student in 1904-05, this fund of

$13,145.68, provides annual scholarships for "such worthy men and women of good character" as selected by the President of the College.

The Eva Workman Swigart Scholarship (1940). The late W. Emmert Swigart of Huntingdon, Pa., and his children established this scholarship in memory of their wife and mother. The income from an endowment fund of $23,812 is intended for music students.

A. F. Tegen Scholarship Fund (1968). A general Public Utilities Scholarship in honor of Mr. A. F. Tegen.

The James G. Thompson Memorial Fund (1976). A scholarship fund has been established by General Finance Service Corporation of Huntingdon in memory of the co-founder and chairman of the board, James G. Thompson. The interest from the fund will be used to provide an annual scholarship grant for a needy and worthy student.

The Paul H. Tyson Memorial Scholarship Fund (1966). A scholarship fund of $3,761 was established by his friends and business associates to honor the memory of the late Paul Tyson '37. The income of this scholarship is to be used annually to aid a worthy student, preferably from the vicinity of Spring City, to be selected by the President of the College.

Union National Bank and Trust Company 100th Anniversary Annual Scholarship (1966). The Union National Bank and Trust Company of Huntingdon gives $500 to a student from Huntingdon County in honor of its 100th Anniversary in 1966. Preference is given to a male student in Business Administration and Economics.

The David Maurice Wertz Scholarships (1935). An endowment of $5,544 for two scholarships has been provided by the late D. M. Wertz of Waynesboro, Pa. Preference is given to men who are members of the Lutheran Church in America.

The John C. Yenter Scholarship (1955). A fund of $12,000 was given to Juniata by the late John C. Yenter, of Tyrone, Pa., to provide a scholarship for a needy student from Tyrone or Huntingdon.

Loan Funds

As a further means of helping students meet their college expenses, a number of loan funds have been established in addition to the government loans mentioned in the Student Finances section (see p. 31).

The John Robert Ake Memorial Fund (1947). This fund was established by Mr. and Mrs. John A. Ake in memory of their son, John Robert Ake, who was called to the service of his country when a freshman in April, 1943. He died in Japan on November 17, 1945. $500 is available each year for worthy students.

General Brotherhood Board Student Rotary Loan Fund. Students who are members of the Church of the Brethren and who have completed one year in college may receive a loan of up to $200 in any one academic year.

The Charles A. Frueauff Foundation Loan Fund (1974). A revolving loan fund of $10,000 has been established by the Charles A. Frueauff Foundation to assist premedical students who clearly need and deserve help and who show the highest promise of future usefulness in the profession of medicine.

The Jessie Smith Noyes Revolving Student Loan Fund (1972). A fund of $20,000 has been provided by the Jessie Smith Noyes Foundation of New York for a revolving student loan fund.

The Royersford Church of the Brethren Loan Fund (1962). The Royersford Church of the Brethren Men's Sunday School Class has contributed $1,726.25 as a revolving loan fund with preference for members of that congregation at Royersford, Pa.

The Allen V. Shaffner Loan Fund (1968). Through a bequest, a loan fund of $100,000 was provided by the late Allen V. Shaffner of Huntingdon, Pa., in memory of his wife, Laura M. Shaffner and his sister, S. Elsie Peeples, to assist worthy students who need financial help.

The Mr. and Mrs. A. P. Silverthorn Fund (1956). The late Mr. and Mrs. A. P. Silverthorn of Sebring, Fla., who were associated with Juniata for many years, have contributed through their will

an amount in excess of $31,273, the income from which is to be used as loans to worthy students.

Tudor Foundation Loan Fund. Through the generosity of the late Aaron Rabinowitz and The Tudor Foundation of New York a loan fund of $25,000 has been made available for needy and worthy students.

Emory A. Zook Memorial Loan Fund (1967). This scholarship was established from the residue of a gift annuity and from the estate of the late Emory A. Zook, a graduate of Juniata in the Class of '06, and a former teacher of German in the secondary schools of Pittsburgh, Pa.

Prizes

The John M. and Thomas F. Bailey Oratorical Award. A prize of $75 is to be presented at commencement to the young man who, in the opinion of the faculty, is most outstanding in the field of public speaking or debate. This award was established by the late Hon. Thomas F. Bailey of Huntingdon, Pa., formerly President Judge of Huntingdon County from 1916 to 1936.

The Alice G. Blaisdell Prizes in Geology and Mathematics. Professor B. Edwin Blaisdell has established two prizes of $100 each to be awarded annually to graduates with distinguished undergraduate records in mathematics and geology, in memory of his late wife, Alice G. Blaisdell.

The John E. Blood Memorial Award. This award was established by relatives and friends of the late John E. Blood to go to that senior athlete who has earned at least four varsity letters and who has earned the highest grade point average.

The Dr. Andrew B. and Maria F. Brumbaugh Science Prize Fund. The late Dr. Gaius M. Brumbaugh '79, M.S. '98, Litt.D. '26, M.D. '88, Georgetown, of Washington, D.C., established a fund of $16,447 to provide science prizes of $100 each in memory of his parents, the late Dr. Andrew B. Brumbaugh, M.D., 1866, University of Pennsylvania Medical School, and the late Maria F. Brumbaugh. These prizes are awarded annually only to graduates with distinguished undergraduate records in biology, chemistry or physics. Dr. Andrew B. Brumbaugh, one of the founders of Juniata, was a Trustee and the Secretary of the Board of Trustees from its inception in 1878 until his death in 1908.

The Raymond R. Day Social Science Prize. Dr. Raymond R. Day '45 of Wooster, Ohio, provides annually a prize of $100 to be given to a senior who has demonstrated outstanding academic personal skills relevant to the work of the helping professions. This award is made to a student whose Program of Emphasis is in the area of sociology, psychology, urban studies, etc., and who shows evidence of having participated in social service programs as an undergraduate.

The Justina Marstellar Langdon Prize. In memory of their daughter, the late Mrs. Justina Marstellar Langdon, the late Mr. and Mrs. James F. Marstellar of Bethlehem, Pa., have given a sum of money, the interest of which, $50, is awarded as a prize to that senior girl in the College who best exemplifies the spirit of helpfulness to others, gentleness of character, and loyal devotion to the College.

The Stanford Mickle Athletic Award. This award, established on June 6, 1949, recognizes that man of the graduating class who, like Stanford Mickle (student 1940-41, 1941-42), loved athletics, participated and manifested a wholesome interest in sports, and contributed to the promotion of athletics at Juniata. A loving cup is presented annually by the Varsity "J" Club, and the names of the recipients are engraved on a plaque which has been presented to the College by the parents, Mrs. Russell Mickle and the late Mr. Mickle, of New Paris, Pa.

The Wilbur W. Oaks Prize. In memory of the late Dr. Wilbur W. Oaks, a physician and surgeon, Mrs. Jane B. Swigart of Huntingdon has established a $100 prize to be awarded to a senior biology major having a good academic record, a friendly and outgoing personality, and broad cultural interests.

The William S. Price Social Science Prize. The late Mrs. William S. Price of Royersford, Pa., established a prize of $100 in memory of her late husband, William S. Price, N.E. '84. This prize is awarded to a graduate in Division II, The Social Sciences, on the basis of distinguished undergraduate work, especially in the program of emphasis. Mr. Price, former treasurer of the Public Ledger Company, Philadelphia, was a Trustee of Juniata from 1936 until his death in 1949, and was treasurer from 1942 until his death.

Charles M. Rice Accounting Prize. A prize of $50 has been established by Charles M. Rice, Altoona, Pa., to be given to that

senior student majoring in economics and business administration who is outstanding in accounting. The recipient is determined by the faculty in the Department of Economics and Business Administration.

The John R. and Emma G. Wald Humanities Prize. The Wald Foundation, Inc., of Huntingdon, Pa., established in 1965 a prize of $100 to be awarded annually to a qualified graduate in Division I, the Humanities. The prize is awarded on the basis of distinguished work especially in the program of emphasis. Mr. Wald was the founder of the John R. Wald Company, Wald Industries, and Prismo Safety Corporation.

Alumni Athletic Awards. Twelve athletic awards have been established by Juniata alumni for the purpose of recognizing annually the outstanding athlete in each intercollegiate sport. The donors for these awards are:

Football line
George L. Weber '40.....Malvern, Pa.
Football back
Dr. J. Harold Engle '23.....Waynesboro, Pa.
Basketball
Prof. Jack E. Oller '23.....Huntingdon, Pa.
Wrestling
David L. Helsel '61.....Hollidaysburg, Pa.
Baseball
Charles F. Goodale '39.....West Chester, Pa.
Track
J. Foster Gehrett '16 (deceased).....Pittsburgh, Pa.
Golf
C. Blair Miller '49.....Huntingdon, Pa.
Tennis
Calvert N. Ellis '23.....Huntingdon, Pa.
Cross-Country
C. Clifford Brown, Sr. '29.....Bellefonte, Pa.
Women's Basketball
Mr. and Mrs. David A. Kreider '71, '68
Huntingdon, Pa.
Field Hockey
Thomas B. Robinson '66.....Huntingdon, Pa.
Women's Tennis
J. M. Haskell '65.....Pottstown, Pa.

These donors have established a fund which will purchase a statue trophy for each annual recipient and a plaque which is hung in the Memorial Lobby of the physical education building.

Special Endowments

Professorships

John Downey Benedict Professorship in English. In recognition of a bequest of Lt. John Downey Benedict, of Waynesboro, Pa., who was killed in action in Southern France in World War II, the Trustees of Juniata named a professorship in English in his memory. Lt. Benedict was interested in the Liberal Arts and the Great Books.

William I. and Zella B. Book Professorship in Physics. A professorship in physics has been established by the late Dr. William I. and Zella Benedict Book. An alumnus of Juniata in the Class of '96, Dr. Book earned his Ph.D. from the University of Pennsylvania, where he served for many years as Professor of Physics. He was a member of the Juniata Board of Trustees. Mrs. Book was a member of the Class of '96.

I. Harvey Brumbaugh Professorship in Classics. Through class organizations, the Alumni Association of Juniata contributed, in the late 1930's, to the endowment of a professorship in classics as a memorial to the late Dr. I. Harvey Brumbaugh. He was for many years Professor of Classics, Acting President of Juniata, 1899-1911, and President 1911-1924.

Jacob H. and Rachel Brumbaugh Professorship in Chemistry. By his will, Dr. Norman J. Brumbaugh designated a major portion of his estate to establish a memorial professorship in chemistry honoring his parents, Jacob H. and Rachel Jodon Brumbaugh. Prof. Jacob Brumbaugh was a member of the faculty and Principal of the Normal School. He served on the Board of Trustees, 1883-1934.

Martin G. Brumbaugh Professorship in Education. Friends of the late Martin Grove Brumbaugh contributed funds for a memorial professorship in education as a tribute to his significant contribution to education. He was Huntingdon County Superintendent of Schools, Professor of Pedagogy, University of Pennsylvania, Superintendent of Schools, Philadelphia, Pa., President of Juniata and Governor of the Commonwealth of Pennsylvania.

The Charles A. Dana Supported Professorships. This fund was established in 1970 by a grant of $250,000 from the Charles A. Dana Foundation. In fulfillment of a matching requirement attached to this grant, Juniata alumni, trustees, and friends

have given a like amount. The income from this fund, which totals $500,000, is used annually to give partial support to the salaries of four distinguished professors.

Mary S. Geiger Professorship in Religion. Mary S. Geiger, of the Philadelphia First Church of the Brethren, and a member of the Board of Trustees, established the first endowed professorship at Juniata in 1906. Her gift provided for a professorship in religion.

The J. Omar Good Visiting Distinguished Professorship of Evangelical Christianity. With a bequest from the late J. Omar Good, a Juniata student in the mid-1890's and former Philadelphia printing executive, a professorial chair has been established at Juniata to perpetuate "the Historical Triune Faith of Protestant Christianity." The professorship will bring to campus recognized authorities in the field of evangelical theology and its allied or related disciplines, with appointments made from year to year and a limit of five years for any single incumbent. Mr. Good, who died in 1969 at the age of 92, also provided an additional $1-million, the largest gift ever made to the College, for Juniata in his will.

Lectureships

The John C. and Elizabeth E. Baker Peace Fund (1974). In response to a concern for peace and a growing awareness by many students of the dangers posed by violent forms of human conflict, an interdisciplinary program of Peace and Conflict Studies has been developed. This program has been funded by the generosity of Dr. John C. and Elizabeth E. Baker of Essex Fells, N.J.

The G. Graybill Diehm Lectureship in Political Science. A lectureship in Political Science has been established at Juniata to honor the late G. Graybill Diehm of Lancaster, Pa. Mr. Diehm gave 35 years of public service as a member of the State House of Representatives, Republican County Chairman, State Senator, Chief Clerk to the State Senate and Top Advisor of the Pennsylvania GOP Leaders. He believed in strict accountability of public monies and in the private enterprise. In keeping with his interest, this lectureship brings to the Juniata campus speakers on such subjects as political leadership, governmental operations and procedures on the state and local level, and participation by a responsible citizenry.

The Calvert N. Ellis Humanities Series. Through the generous contributions of alumni and friends, an endowment of more than $29,000 was raised at the time of the retirement of Dr. Ellis as President, to bring to the campus annually visiting lecturers and artists in the area of the humanities.

The Will Judy Lectureship. The Will Judy Lectureship makes possible each year a series of lectures intended to supplement and enrich the academic program of the College. It was established in 1958 by the late Captain Will Judy '11, of Chicago, a graduate and devoted friend of Juniata, who contributed $20,000 for this purpose.

Each year the Lectureship brings to the campus speakers who are leaders in government, education, the arts, natural science, business, or some other area of interest to the College community. The detection of fallacies in reasoning is a feature of at least one lecture. The Lecturer remains on campus long enough to enter into the conversation generated by his formal remarks.

The Fogelsanger-Murphy Lectureship in Humanities. By the will of the late John Mervin Fogelsanger of Philadelphia, Pa., and through the generosity of his sister, the late Mrs. Florence Fogelsanger Murphy, and her husband, the late Reverend Ross D. Murphy, D.D., an endowment of more than $85,000 has been established to bring visiting lecturers and artists in the Humanities to enrich the cultural and spiritual life of the Juniata community.

Mr. Fogelsanger was a member of the Board of Trustees from 1914-1936, the Reverend Ross D. Murphy was on the Board from 1927-1959, and Mrs. Murphy was a member of the Board of Trustees from 1963 until her death in 1966.

The Beachley Distinguished Professor Award. Established by Donovan R. Beachley, Sr. '21 and the late Mrs. Grace Rinehart Beachley '21 and Mr. and Mrs. Donovan R. Beachley, Jr. '47 of Hagerstown, Md., $1,000 is awarded a professor who contributes to the development of his department and the College, is an effective teacher, has made contributions in his field of interest and is active in the community. Selection for the annual award is based upon nominations from students, faculty,

alumni and trustees. Length of service to the College is also considered.

The Award has been made to:
Dr. Kenneth W. Crosby—1968
Mr. Paul M. Heberling—1969
Dr. Donald M. Rockwell—1970
Dr. Eva R. Hartzler—1971
Dr. Earl C. Kaylor, Jr.—1972
Dr. Esther M. Doyle—1973
Dr. Klaus Kipphan—1974
Dr. William E. Russey—1975
Dr. J. Peter Trexler—1976

Art Funds

Dr. and Mrs. M. R. Evans Art Exhibit Fund (1964)	$ 1,100.00
Luke Ellis Memorial Art Fund (1965)	7,754.00

Library Funds

Library Fund (1906)	$ 9,372.95
Chemistry Library Fund (1945)	1,326.77
Helen Baker Library Fund (1956)	5,100.00
Lillian M. Evans Library Fund (1961)	5,924.85
Class of 1953 Book Fund (1963)	5,866.66
Mr. and Mrs. David O. Harbaugh Memorial Book Fund (1964)	1,000.00
L. A. Beeghly Library Fund (1965)	122,000.00
Stephen L. Horn Memorial Fund (1965)	11,550.16
Aaron and Clara Rabinowitz Library Fund (1966)	83,400.00
Ernest S. Statler Memorial Book Fund (1967)	1,010.00
John C. and Elizabeth Baker Library Fund (1969)	5,000.00
J. Clyde Stayer Memorial Book Fund (1969)	7,925.00
Charles Stacy Shively Memorial Book Fund (1970)	2,000.00

Miscellaneous Funds

Gertrude L. Butler Fund (1970)	$ 1,590.88
Gordon P. Foust Memorial Fund (1971)	4,498.00
Dr. Donald M. Rockwell Fund (1972)	5,132.00
Elizabeth Weeks Swigart Fund (1958)	1,000.00
Dr. Ernest C. Wagner Memorial Music Fund (1968)	1,135.00

The Trustees, Faculty, Alumni, and Students
of
Juniata College
Hereby give public expression to their
Profound Gratitude and Esteem
for
Those who have established
Significant Endowments
in Support of Teaching and Cultural Events

These endowments enable Juniata to emphasize teaching as the essential element in liberal arts education. The quality of learning by Juniata students is advanced for all the years to come by these benefactions.

The Herbert A. and Marjorie F. Miller Endowment in Support of Teaching in Economics and Business Administration.

The Edith B. Wertz Endowment for Support of Cultural Events.

The J. Omar Good Visiting Distinguished Professorship of Evangelical Christianity.

Joseph R. and Jane S. Good Endowment in Support of Scholarships.

Dr. John C. and Elizabeth E. Baker Endowment in Support of Peace Studies.

The Board of Trustees of Juniata has approved a plan for the recognition of major endowment gifts. Recognizing that liberal arts education is dependent upon sound teaching, the Trustees seek to give special recognition to gifts of $100,000 or more. These may be direct gifts or gifts through bequests or gift annuities in which the actual amount available for support of teaching through endowment in perpetuity is of the amount stipulated. These major gifts are recognized here and also through presentation of special citations to the donors and through the erection of bronze plaques which are placed in the classroom areas occupied by the designated departments.

Gifts and Education

The comprehensive fees described on page 27 do not cover the complete cost of education at Juniata. The remainder is met by gifts from a number of major sources: trustees, alumni, friends, business and industry, corporate and philanthropic foundations, government agencies, deferred gifts, capitalized annual giving and bequests; and by income from the endowment fund. The endowment funds include restricted accounts for professorships, scholarships, lectureships, prizes and other uses as described above and throughout this catalog. In addition, many of the buildings on the Juniata campus were made possible by gifts and bequests.

Juniata is exceedingly grateful to its many benefactors and deems it fitting to express that gratitude here. Those interested in providing further support may contact the Vice President for Development, Juniata College, Huntingdon, Pa., 16652.

Alumni Association

Organized in 1885, the Alumni Association at Juniata continues to be a dynamic part of the total College community. Its membership includes some 6500 graduates and former students.

The Alumni Council, acting as an official channel of communication between alumni and the College administration, includes one member of the faculty, a Parents Association representative, three representatives of the student body, and 18 alumni elected at large to three-year terms. Members of the Alumni Association nominate three representatives to Juniata's Board of Trustees, and national Association officers are elected annually.

Throughout the United States some 20 Alumni Clubs are active in areas boasting concentrations of Juniatians. The clubs provide opportunities for alumni and friends to gather socially and work effectively in promoting the welfare of the College.

Juniata's alumni have historically exhibited unusually strong support of the College through a high percentage of participation in its several giving programs. Last year, 49 percent of the living alumni showed support in this manner, participating in (1) *The Margin of Difference,* a $10.1-million capital campaign concluding this year; (2) *The Annual Support Fund,* which has provided more than $900,000 since its inception in 1969 for assistance to worthy students and support of faculty development; and (3) deferred giving programs which aid both the donor and the institution.

The Alumni Association also takes great pride in its assistance to the College's Admissions Office. Students interested in learning more about Juniata are invited to contact the alumni representatives whose names appear below.

Alumni Council 1976-77

Officers

President, RICHARD L. DODGE '57, Harrisburg
Vice President, FRANCES CLEMENS NYCE '46, Westminster, Md.
Secretary, DAVID A. KREIDER '71, Huntingdon
Past President, KENNETH J. WENGER '50, Pittsburgh
Chairperson, Annual Support Fund, DONALD L. ROBINSON '51, Reading

Representatives to the Board of Trustees

CHARLES C. BROWN, JR. '59, Bellefonte
GEORGE FATTMAN '58, Johnstown
LILLIAN G. RAYCROFT '50, State College

Council Members

DONALD J. COUGHENOUR '59, Morristown, N.J.
JOHN M. CRAMER '63, Pittsburgh
STANLEY L. DAVIS, JR. '59, Oak Park, Ill.
JAMES C. GIBBEL '60, Lititz
JANE BRUMBAUGH GOUGH '60, Upper Marlboro, Md.
SHARON EDGAR HASKELL '65, Pottstown
JAMES R. HECK '59, Landisville
GALEN E. KEENEY '52, Harrisburg
RICHARD E. KRAMER, JR. '57, Orange, Conn.
MICHAEL H. LONG '71, Huntingdon
BARBARA WALLS McQUAIDE '59, Centre Hall
THELMA E. MORSE '29, Bedford
WILLIAM S. MURRAY '50, Rockville, Md.
LINDA UNGER PHELPS '66, Flourtown
W. JOEL SIMPSON '65, Camp Hill
CAROLYN AMBLER WALTER '66, Swarthmore
JAMES J. WARFIELD '66, New York, N.Y.
PAUL R. YODER, JR. '47, Wilton, Conn.

THE JUNIATA CAMPUS

Key to Buildings

(Date in parenthesis indicates year of construction or acquisition).

1—Brumbaugh Science Center (1965)
2—Swigart Music Hall (1950)
3—Tussey Residence Hall (1966)
4—Terrace Residence Hall (1966)
5—North Residence Hall (1955)
6—Sherwood Residence Hall (1961)
7—College Manse
8—N. J. Brumbaugh House (1953) — residence
9—L. A. Beeghly Library (1963)
10—Oller Auditorium (1940)
11—The Cloister (1928) — residence
12—Memorial Physical Education Building (1951)
13—Ellis College Center (1969)
14—Good Hall (1967)
16—Old Gymnasium (1901)
17—Maude Lesher Residence Hall (1957)
18—I. Harvey Brumbaugh House (1947)
19—Oller House (1920)
20—Carnegie Hall (1907) and Shoemaker Galleries (1964)
21—Founders Hall (1879)
23—Oneida Hall (1949)
25—South Residence Hall (1962)
26—Faculty Club (1946)
27—Stone Church of the Brethren (1910)
28—Heating Plant and Maintenance Building (1915-1956)
29-32—East Residence Houses (1970)
29—Flory House
30—Kline House
31—Long House
32—Miller House

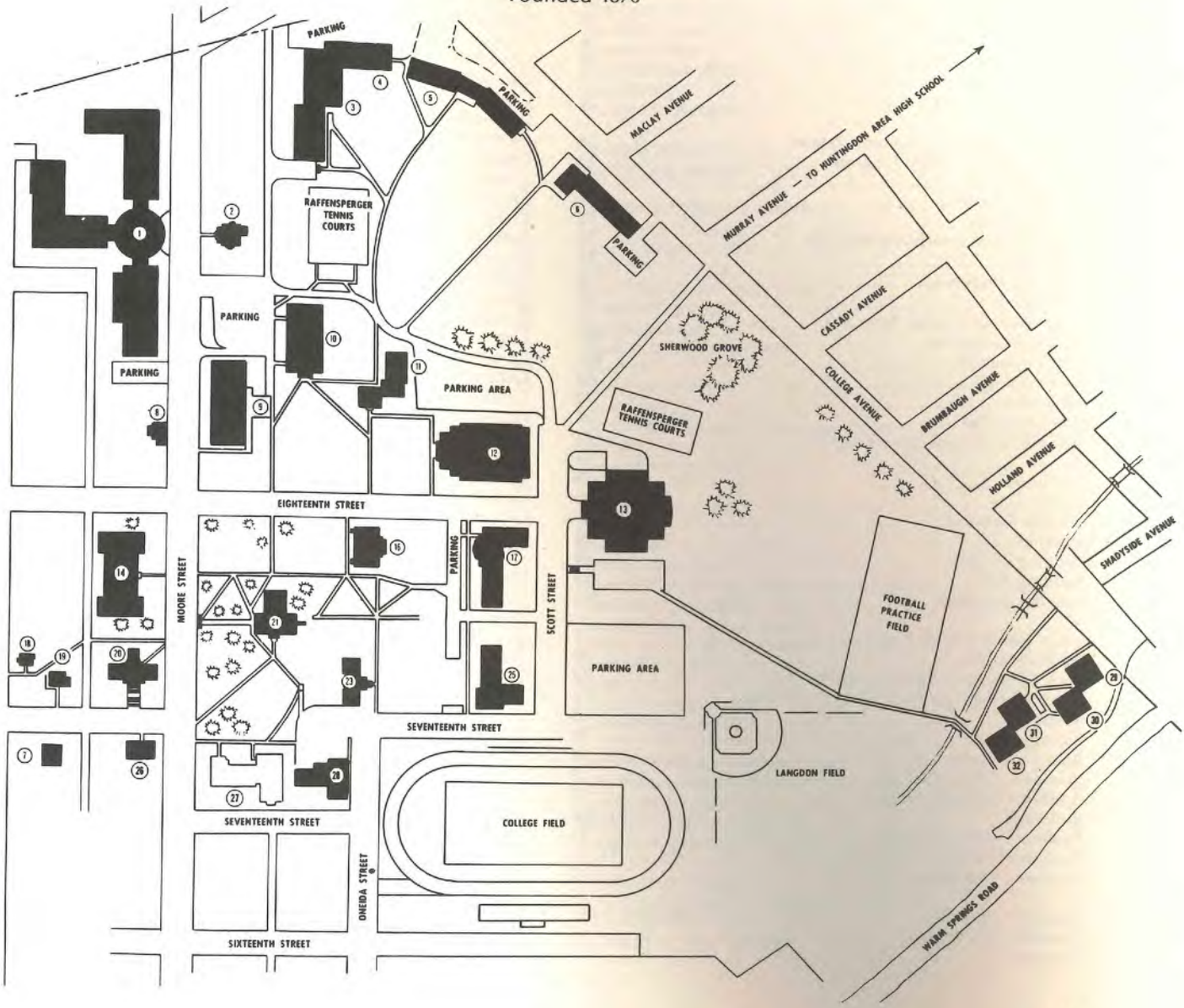
Location of College Offices

Brumbaugh Science Center — Faculty, Division III, Secretary (second floor).
Carnegie Hall — Art Department.
Ellis College Center (first floor) — Student Government, College Center Board, *Alfarata, Juniatian,* Bookstore, Post Office, Student Bank, Career Planning and Placement.
Ellis College Center (second floor) — Baker Refectory (Dining Hall), Faculty Lounge, Food Service, President's Dining Room.
Ellis College Center (third floor) — Director of Programming, Snack Bar (Tote), Game Room, Ballroom, Main Lounge, Campus Minister, Annex.
Founders Hall (ground floor) — Admissions, Development, WJC Radio Station.
Founders Hall (main floor) — President, Dean of Academic Affairs, Dean of Student Services, Alumni Affairs, Registrar, Information Center, Financial Aid.
Founders Hall (third and fourth floors) — Faculty, Division I, Secretary.
Good Hall — Faculty, Division II, Secretary (third floor).
I. Harvey Brumbaugh House — Public Relations.
L. A. Beeghly Library — Director of Libraries, Archives Room (basement).
Maintenance Building (first floor) — Superintendent of Buildings and Grounds, Maintenance Foreman, Maintenance Shops.
Maintenance Building (second floor) — Central Stores, Foreman of Custodians.
Maude Lesher Hall — Infirmary, Early Childhood Educational Center.
Memorial Gymnasium — Director of Athletics.
Oneida Hall (first floor) — Data Processing, Print Shop.
Oneida Hall (main floor) — Business Manager, Controller, Accounting, Cashier's Office, Purchasing.
Swigart Hall — Music Department.

JUNIATA COLLEGE

Huntingdon, Pennsylvania

Founded 1876



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